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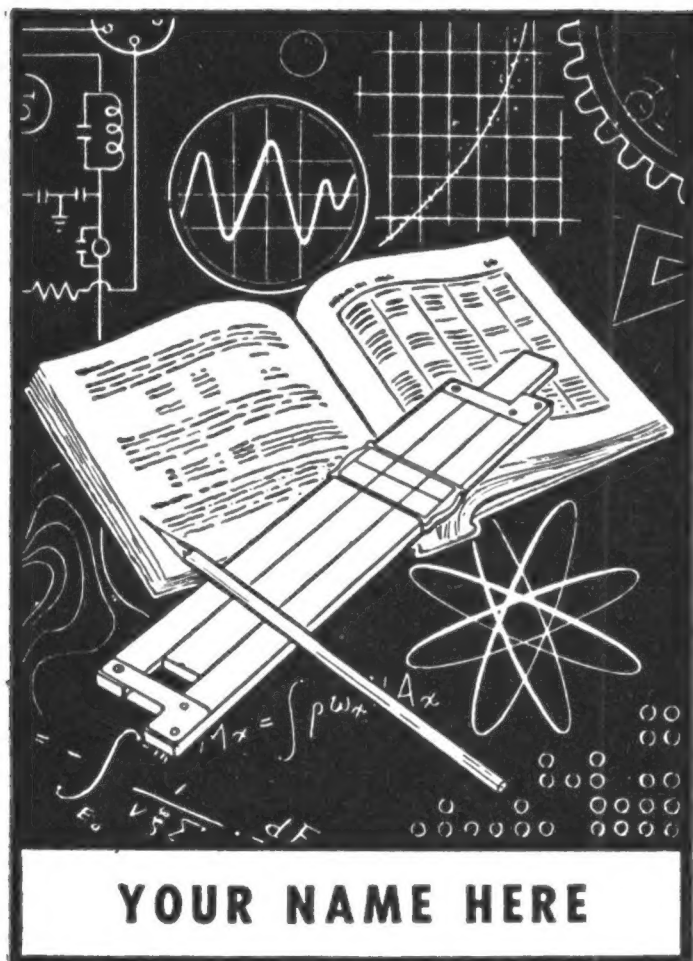
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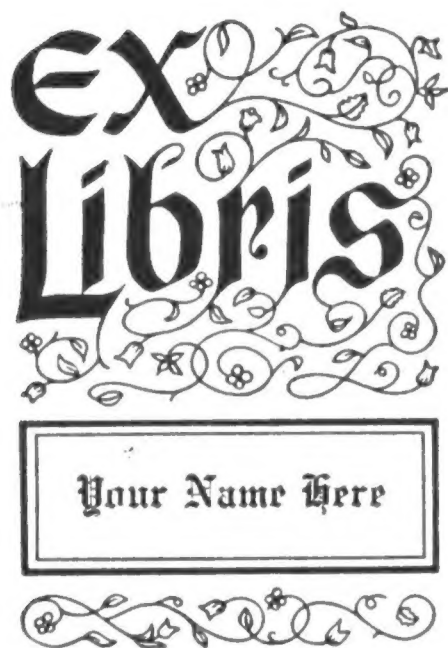
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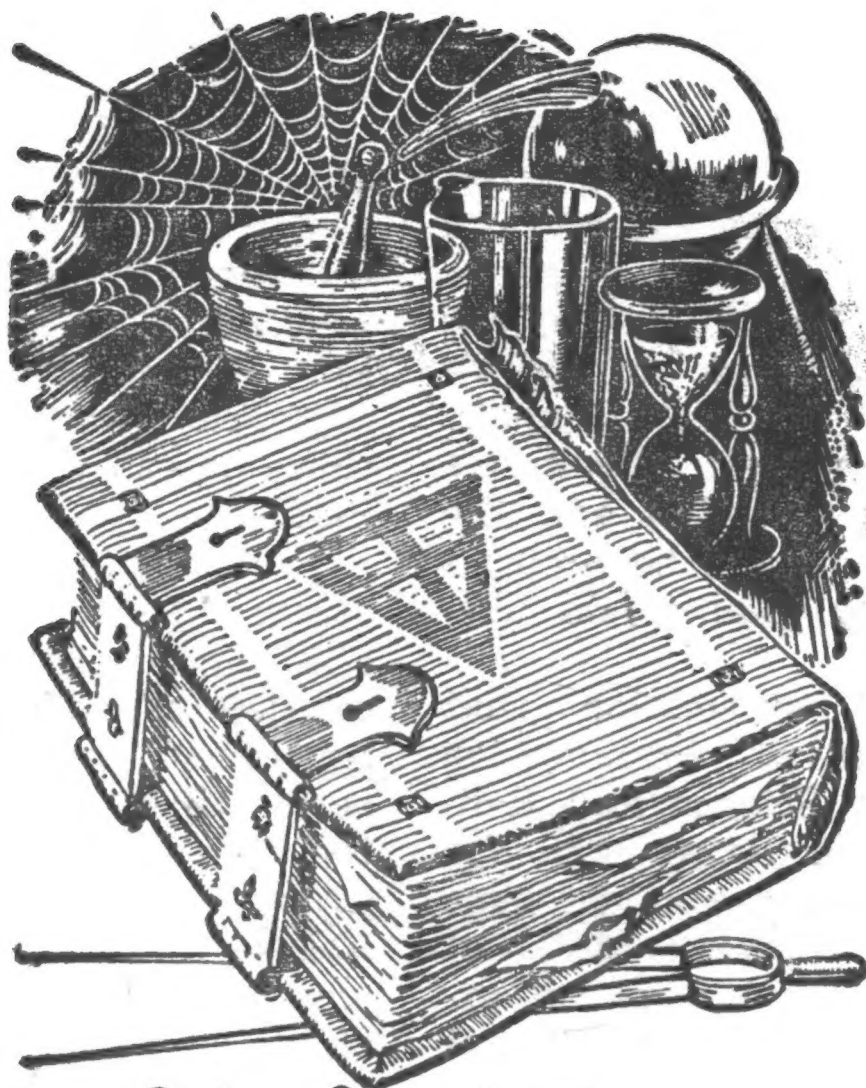
# THE DAY THEY THREW GOD AT ME

**T**here I sat, as the ancient saying goes, with my teeth in my mouth and my bare face hanging out. Clamped to my head was a telephone operator's transceiver; before me was a large microphone; at my left was Hizzoner the Editor, F. Pohl, Esq., similarly caparisoned; and across from us sat a personable man hight Ed Joyce, who runs this predicament weekdays on CBS Radio. The transceivers shrilled in our

ears at intervals, and from Out There in Radioland people threw questions by telephone. It is a great sport for those among you who would like to know what a live decoy feels like when he recognizes, among the bulrushes, a shooter of sitting ducks. Actually, this fear wasn't realized that day, and we had some interesting questions and a pleasant time of it; but one question does, I think, deserve a little space here.



Secrets  
entrusted  
to a  
few



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Fred had been describing the recent work on DNA, and the creation of life in the laboratory. "Don't you think," demanded the disembodied voice from Out There in Etc., "that to create life in the laboratory is to usurp God?"

Answer: No. Man's hands are God's work; the work of man's hands is God's work. (I spoke—and speak—for myself, of course.) So much for the question and the questioner, but I'm glad he brought it up and equally glad to do likewise here.

The recurring suggestion that there's some sort of Armageddon going on between Science and Religion is, I think, a straw man for bigots. That Science has at one time or another dealt certain kinds of Religion a heavy blow, I do not argue. I do believe, however, that what received the blow was this or that set of fixed convictions, and not Religion itself. And I think that the idea that Science and Religion must of necessity be opposed to one another is a throwback at least to the 19th Century—perhaps farther—and that to engage in this battle any more is equivalent to, and as quaint as, re-fighting the War of the Roses.

It seems to me that this Armageddon notion springs from a concept which is more than a little insulting to both camps. Reduced to its simplest terms, it reads: *Knowledge is Finite*. The rationale would seem to be this: that only God can know everything and do everything. That the more man knows, the closer he gets to knowing it all, the more his science does, the closer it gets to doing it all; and that the end product would be an omniscient

and omnipotent man who would usurp the place of an omniscient and omnipotent God.

Now, if science proves anything at all, it is that both knowledge and power potentials are infinite. The ultimate in either can never be reached. For those who care to believe it, God already has this knowledge and potency. How then could there possibly be a conflict in the matter?

Furthermore, science has demonstrated time and again, and will always demonstrate, that the production of solutions is the richest source of new problems. This too seems to be an infinite process. As the size of our body of knowledge grows, so does the size of the as-yet-unknown. And ever shall. Many churchmen can take this calmly in stride, regarding it (in which I concur) as a living manifestation of the greatness of this infinite Cause.

I know personally a good many scientists. Being people, they present a cross-section of convictions and attitudes quite as varied as those of any people. In the area of religion, I have met scientists far more devout than I could ever want to be; I've met unmoved, habitual, Sunday-best churchgoers, backslid Orthodoxers; agnostics, atheists and people who just don't care one way or another.

There is no secret sect of guys with test-tubes out to destroy the temples. There are more anti-religionists outside Science than in it . . . and if God thinks about this at all, He probably feels that He made a cosmos quite roomy enough to contain them all.

THS











# MACK

BY R. J. BUTLER

ILLUSTRATED BY MORROW

**Against the invaders from  
space man had a secret ally  
— from the ocean's depths!**

**M**ack maintained later he had merely assessed the situation and acted accordingly—something *any* dolphin could have done.

The Admiral was just plain impressed—and proved it—and, for his part, Gabriel Anaka was overwhelmingly satisfied in having proved one point.

The only ones who had no comment at all were the Tegels and the manta ray.

First, there had been the spotting of the Tegel ship, a feat made easier (if not pleasanter) by its monstrous size.

While the earth fleet circled it warily, the best minds available were

put to work in an effort to establish communications and find out what the intentions were.

The Tegels obliged, in their own time, and when the response to the beamed math-logic was received, the message didn't take long to decipher.

It said in effect: "Your oceans interesting. Investigating." The signature symbols were roughly equivalent to "Tegels."

While military minds pondered what was meant by "investigating," the Tegels provided the answer. They plopped down into the Gulf of Mexico a few miles off the Alabama coast.

"Starship Falls Off Alabama,"



one responsible southern daily informed its readers. The Admiral, with considerably less humor, dispatched a submarine to the scene.

This move resulted in a long silence followed by a curt communication requesting "the absence of disturbances in our vicinity."

There was no overt threat, but, as the Admiral pointed out, there was something ominous about the way "our" was used.

Afro-Asian Commander Hoghenza recommended treaty talks.

Soviet Commander Tushkin urged immediate attack.

Indian Commander Bihar advocated neutrality for the Gulf of Mexico.

The Admiral went in circles with them.

Finally he got them to agree—to investigate.

And the best way to investigate, the Admiral concluded, was with Mack and Anaka. It was a conclusion arrived at with more than a few reservations.

Mack was one of the ablest dolphins serving with Earth Fleet, but, to the Admiral's way of thinking, the eight-foot cetacean was a little too "unmilitary" in his attitude.

Too independent, bluntly.

He thought the same of Anaka, but there was no way of getting around it. A man-dolphin team was the best way to keep tabs on the Tegels, and Mack and the tall Polynesian had demonstrated their ability to get along.

Demonstrated it *too* well in some cases, the Admiral thought.

Item: On Venus, Anaka and Mack

arrested on charge of trying to procure a gilled Venusian for immoral purposes. Case dismissed—but widely reported—after Mack argued it would have been impossible for either of them to be immoral with a lizard even if they had been sober.

Item: Off Ganymede, Anaka and Mack demoted for polluting hydroponics tank in experiment to ferment algae alcohol.

And so on.

The Admiral sighed and summoned the two to Fleet Headquarters.

Anaka stood stiffly at attention, eyes fixed on a crack in the wall.

"Furthermore," the Admiral continued sternly, "I want to impress on you the fact that the Tegels may be technologically equal—or even superior—to us."

"Yes, Admiral."

The Admiral picked up a model space cruiser and eyed it thoughtfully.

"As for you, Mack," he said, turning toward the circular tank, "I don't think I need stress the importance of discipline in this matter."

"Admiral . . . right. Not . . . needing . . . stress . . . point." The words came booming out of the amplifying unit surgically implanted by Mack's "mouth"—the blowhole on top of his head.

The Admiral's face turned red. He considered a lecture on what could happen—what *might* happen—if the Tegels turned out to be both militarily able and hostile at the same time.

But he changed his mind and stalked out of the room.







The last thing he saw before he slammed the door was Anaka looking at Mack in admiration as the dolphin did a neat figure-eight on his back.

“Possibly . . . dull . . . as . . . mul-  
let . . . head,” Mack commented later as he towed Anaka around the Tegel ship in a wide circle for the fiftieth time.

“Yeah,” Anaka agreed disgustedly, hitting the stud to the small outside mask speaker with his chin.

He loosened his grip on the plastic reins trailing from the halter around the dolphin’s body.

“Guess I’d better file a report.” It was understood Mack wouldn’t have to do it unless an emergency came up. It took him too long to form the difficult human words by vibrating the blowhole which served as his nostril.

Anaka kicked his feet and headed for the surface, where the buoy with the tele-beam bobbed monotonously.

The Admiral had demanded complete, concise reports. Anaka complied.

“No activity around the ship,” he advised. “And no sign of a Tegel yet.”

He signed off and went under again. When he reached the big dolphin, he hit him on the head playfully with a meaty fist.

“Chow?”

“Thinking . . . good . . . splendid . . . damfine . . . ideas.”

Anaka pulled a tube of “frogman’s crud” from his belt and sucked on the tasteless combination of mushy fruit and protein.

“You . . . enjoy?”

“Sure.”

“Then . . . hoping . . . swallow . . . whole . . . thing,” Mack rumbled, thwacking Anaka on the back cheerfully with his tail. Anaka choked, messing up the inside of his mask.

“Overgrown sardine!” he shouted.

Mack whistled a dolphin laugh and swam for shallower waters, where he overtook a school of speckled trout. He managed to gulp down three small ones before the rest of the school escaped.

Anaka flipped off the glaring Hensen light and finished his meal in darkness, mulling over things to do to Mack.

“So,” First Garn bubbled happily, “this is found in plentitudes?”

With two tentacles he brought to his mouth the delightful new food creature they had discovered. He took a small bite, munching in pleasure.

“There is much of it,” Second Garn affirmed, watching the small spade fish disappear.

“Such an offering,” First Garn gurgled piously, “calls for gratitude.” His small red eyes glowed meaningfully.

“Indeed,” Second Garn said, bringing out the metal-leaf Dutiful.

He handed it to First Garn, as was proper, and First Garn began the intonation:

“Prime Garn, power; Prime Garn, obedience; Prime Garn, laws . . . ”

The Tegel crew extended its myriad listening tentacles in obedient reverence.



When it was over, the Tegel ship opened its suction locks to bring in more food samples to see if this new planet was worth while. It wasn't really necessary, however.

First Garn had already decided.

**T**he manta ray was big. It also was irritable.

The irritation started with the churning motor of the fourteen-foot boat.

And it reached its peak when the three men aboard started casting alongside the bat-like ray for the lemon fish that swam under it, feeding on offal.

The ray went down in a power-dive. When it came up, the boat made another run on it for more casting.

With an angry flip, the three thousand pound ray hurled itself over the boat. One man screamed and went over the side.

The other two ducked and closed their eyes.

Mack heard the distant crack as the ray hit the water, and, seconds later, pinpointed it with his natural sonar.

"Unholy . . . king . . . mackerell!"

"Huh? What in hell?" Anaka had been catching a nap, strapped to Mack's back with the reins.

"Ray."

"So what? There's lots of rays around here." The Polynesian unstrapped himself.

"Lots . . . maybe," Mack thundered, pointing his beak toward the Tegel ship, "but . . . not . . . going . . . that . . . direction!"

"Uh, oh!" Anaka had caught the

ray in the Hensen light. "That's the biggest one I ever saw."

"Maybe . . . trouble."

Anaka thought a moment. "If it kicks up any fuss around their ship, no telling how they'll react."

"Good . . . idea . . . getting . . . you . . . better . . . position . . . if . . . need . . . call . . . help." Mack swished his tail for emphasis.

"Okay. I'm going up a hundred feet."

"Going . . . further!" The Tegel ship was in fairly shallow water—about three hundred feet—but Mack knew any violence in the water could rip Anaka's skin-thin pressure suit.

Anaka knew it, too, but he didn't like the idea of leaving Mack alone.

"Listen, dammit, you aren't giving me orders!"

"Not . . . arguing . . . now!" Mack got under Anaka and pushed him up.

By the time Anaka could make out the buoy by natural light, he was grinning behind his mask. Mack always looked after him.

"Be careful, Daddy!"

"Suggest . . . you . . . idiot!" Mack prodded Anaka in the rear with his beak and swam back down alone.

**F**irst Garn wiggled his tentacles exuberantly. Second Garn turned brown in vicarious pleasure.

"There is," First Garn said, "absolutely no reason why we should not clear the way for colonization. No reason whatsoever."

He took another bite out of the small white trout.

"In fact," he continued, "Tokh himself could not dissuade me from

taking over these splendid feeding grounds now."

He tossed the remnants of the fish to Second Garn, who turned orange in appreciation.

First Garn turned to take another sample from the specimen container.

"Alarm, First Garn!" the watch crew signaled in unison before he could grab another small fish.

"Alarm? Specify the nature."

"It is a monster, First Garn," the watch crew replied. "It is coming toward our vessel!"

First Garn swam to the observation scope and activated a scan beam. It took only a second to lock in on the approaching ray.

"By Tokh, it *is* a monster!"

Second Garn sneaked a glimpse and turned purple in apprehension.

"Prepare to blast!" First Garn ordered.

All three hundred of the blast crew readied the weapon.

"Destroy!"

The ray shuddered as the electron pellet struck, sending pain surging down every nerve path. Tail lashing in agony, it moved closer to the Tegel ship.

First Garn turned blue. "Use primary weapon!"

A thousand tentacles worked the fire-control panel. A slim projectile streaked toward the ray.

**M**ack rolled over when the shock wave hit him. After he regained his even keel, he quickly probed the water with his sonar. He spotted only pieces of the big ray.

Mack turned away from the Tegel ship and sped up to Anaka.

The Polynesian had been fast enough from the explosion to avoid injury, but was waving his arms frantically as Mack approached.

"Hell, I didn't catch any of it. What happened?"

"Tegels . . . destroy . . . ray."

"They spot you?"

"Don't . . . think. Being . . . still . . . and . . . not . . . too . . . near."

"What kind of weapons?"

"Unknowing . . . first . . . tried . . . but . . . didn't . . . seem . . . advanced."

"And?"

"Second . . . probably . . . high . . . explosives."

"High explosives?" There was a trace of incredulity in Anaka's voice. "With a ship like that, you'd think they'd have some fission stuff."

"Possible . . . probable . . . but . . . only . . . damfool . . . use . . . fission . . . in . . . water . . . close . . . range."

"That figures. We better get to base personally with this." He grabbed the halter and let the reins out.

Mack was thinking all the way back.

**N**ot only is it stupid," the Admiral barked, "it's also suicidal—for us."

Anaka, not wholly convinced the Admiral was wrong, kept his silence.

Mack didn't. It seemed perfectly logical to him.

"Urge . . . reconsider . . . Admiral. Hard . . . for . . . me . . . express . . . your . . . language . . . but . . . positive . . . will . . . work."

"You have no guarantee, dammit. And we can't take chances!"



"Suggest . . . Admiral . . . knows . . . less . . . these . . . matters . . . than . . . dolphin."

The storm signals were evident on the Admiral's face.

"Don't be insubordinate, Mack," the Admiral growled.

"Will . . . leave . . . then."

Mack had him dead to rights. Although the dolphins were nominally under Fleet advisories, the Treaty of 1998 gave them absolute freedom from human interference. Their service was voluntary.

The Admiral glared down at Mack in the tank. "Get the hell out, in that case. No one's stopping you."

Mack didn't reply. He glanced at Anaka once, then swam through the tank tunnel into the open sea.

The Admiral turned to Anaka. "You think he was right?"

"Well, I just don't know, sir."

"As long as you have any doubt about it," the Admiral snapped, "you're confined to quarters."

First Garn considered the ray's destruction proof that any dangerous life forms could be handled.

"And isn't it true," he asked Second Garn, "that we have seen no other threatening forms?"

"Yes, First Garn."

"And that we have seen no intelligent opposition to our rightful presence here?"

"Yes, First Garn."

"Then we may assume that the intelligent life forms are inferior and fear us. Prepare the summons."

Broken down to its simplest semantic elements, the summons said: "Food good. Come."

Mack took the lead and, in age-old respect for the joy of life and its expression in graceful swimming, slapped the water hard with his tail every minute.

The others waited patiently, and finally Mack spoke in the rapid whistling, clicking, grunting dolphin language.

"I think we are obligated to act for them."

"That might be," the dolphin behind him said, "but can you offer a truly valid reason?"

"They are our friends."

"You have told us of this Admiral."

"But he is at a disadvantage. He does not understand the ways of the waters."

"And you think these Tegels can be regarded in that light?"

"There is every reason to believe so."

"We will get no thanks for it, in all probability."

"We have had our thanks." The meaning was clear, and several of the dolphins further back whistled their agreement.

"Think," Mack said, "of all they gave us. A symbolic language. The ability to develop our own culture. Even a chance to explore space with them."

The dolphin behind Mack could not argue.

Before Homo sapiens discovered that dolphins had brains as fully developed as man's, the dolphins were an intelligent, but cultureless, species. They played, fed and bred with only a primitive language of a few basic meanings. Man had made something

more of them, and Mack wanted a chance to prove it.

"Will you follow me?" he asked.

"Yes," the dolphin behind him said.

Mack listened.

"Yes," the others whistled.

Mack led the way.

Anaka had disobeyed orders.

Being confined to quarters had been bad enough, but the Admiral's indignation had increased instead of mellowing.

He had told Anaka he wouldn't be working with dolphins any more—Mack or any others.

Anaka thought about it for a while in his room.

"The hell with it," he said. He put on his pressure suit and walked to the beach.

The water felt good as it covered him. Almost like his natural element.

Mack picked the Polynesian up on his sonar about a mile from the Tegel ship.

"What . . . doing . . . here?" he asked, nuzzling Anaka's mask gently.

"Coming to watch after you, stupid." Anaka felt a little like crying.

"Suggesting . . . trouble . . . with . . . Admiral?"

"A little." Anaka tried to sound casual.

"We . . . fix . . . that . . . trouble," Mack predicted.

Anaka felt suspicion forming in the back of his mind.

"How's that?"

"You . . . watch."

Anaka swung the Hensen light around. He picked out two dolphins coming in. Then more. And more.

"What in hell?"

Mack whistled rapidly, and the dolphins formed a long line behind him.

"Oh, no!" Anaka moaned as it dawned on him. "You can't be serious."

"Very . . . serious."

"They'll make mincemeat out of you, Mack. You dolphins have no weapons!"

"We . . . thinking . . . Tegels . . . stupid," Mack asserted affably.

"Stupid enough for spaceflight?"

"Special . . . kind . . . stupid."

"I can't talk you out of it?"

"No."

"In that case," Anaka said firmly, "I might as well watch the slaughter. And you're not going to talk me out of it." He took the underwater rocket-gun from its sheath.

Mack gave the equivalent of a shrug with his tail and let Anaka hang on to his back.

First Garn floated complacently as the technical crew prepared to send the rocket bobbing to the surface, from whence it would blast into orbit and transmit.

"This is a moment of historic note," he told Second Garn, who turned a deep crimson in agreement.

"Soon," First Garn predicted, "all of our people will offer us thanks."

He waved his tentacles majestically.

"Let the rocket go!"

He followed it with a scan beam. It rose almost two hundred feet before an alert dolphin saw it, butted it to the bottom, hammered it into the mud and "sat" on it.





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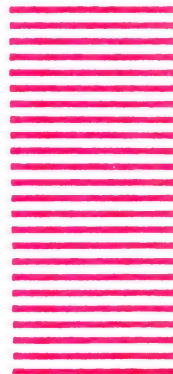
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"Prepare all weapons!" First Garn raged.

Mack whistled urgently. The dolphins withdrew rapidly and set up a cross-pattern of false sonar echoes.

"Destroy!" First Garn screamed. The electron pellets and projectiles went off on a wild tack, misled by the fake sonar.

"Out of ship for attack!" First Garn screeched. The Tegels swam out after the dolphins, pulling portable assault weapons.

Mack led the dolphins toward the Tegels.

"Bring weapons to bear!" First Garn felt victory nearing. At close range, it could not be otherwise.

The thousand-tenacled fire-control team brought the weapons to bear, carefully and accurately as the dolphins slowly came closer.

So carefully was it done that by the time they were ready Mack had led the dolphins in a burst of speed behind them.

"We have been outwitted!" First Garn shrieked. Several hundred Tegels swung around, noted First Garn was correct and awaited his command.

It never came.

Mack swallowed him with ease, and split seconds later the other dolphins were similarly occupied.

Anaka remembered later, with some regret, that he had not fired a single shot.

"In that case," the Admiral laughed, slapping Anaka on the back, "I guess we'll have to credit the dolphins with the whole thing."

"Yes, sir."

The Admiral squatted down by the tank.

"Mack, I disagreed with you when you told me what you wanted to do. I still think the risk was too great and, by all rights, both of you should be busted again."

He paused smilingly. "That is if you'll let yourself be busted *voluntarily*—again."

"Think . . . dolphins," Mack said from the tank, "still . . . know . . . more . . . those . . . things . . ."

The Admiral looked at Mack affectionately "Let me in on it?"

Mack spouted a tall column of water, taking a deep breath.

"Had . . . hunch . . . Tegels . . . have . . . fish . . . way . . . thinking."

"Huh? Anaka beat the Admiral to the punch.

"Had . . . feeling . . . would . . . follow . . . leader . . . blindly."

"But, dammit," the Admiral broke in, "they were capable of space flight, so they must have been smarter than fish."

"Smart . . . some . . . ways . . . stupid . . . others."

"I think I get a part of it, Admiral," Anaka offered "He's trying to tell us they had a blind spot in their behavior—so far as the dolphins were concerned. In other words, without leadership they were absolutely helpless, incapable of independent action."

The Admiral frowned. "How in hell could you count on getting them outside?"

"Was . . . thinking . . . if . . . made . . . mad . . . enough . . . would . . . come . . . after . . . us."

"You didn't know that for sure, though," Anaka insisted.

"No . . . but . . . knew . . . if . . . like . . . fish . . . in . . . thought . . . might . . . attack . . . in . . . group . . . like . . ."

"Like a school of fish?" The Admiral's mouth was open.

"Hoped . . . so."

Anaka put his hand on the dolphin's head. "Were you sure you could foul up their weapons effectively?"

"Not . . . sure . . . anything. Had . . . good . . . hunch . . . and . . . felt . . . our . . . duty."

"Well, I'll be damned," the Admiral said reverently.

"Probably," Anaka agreed. The Admiral didn't even hear him. He was thinking of another assignment for Mack and Anaka.

The President, reading from the official report, told the cheering crowds the dolphins took the chance because they felt they had better odds underwater than might have been had in an open space battle with the Tegels.

And, he added somberly, teams going over the Tegel ship had indeed proved they were right.

There was silence when he informed them of the summons that had been recovered and translated.

Mack was not listening. He was tired from the lengthy questioning of the last few days. And he was thinking of a smaller, slimmer dolphin he had not seen for a long time. So he was reasonably surprised when Anaka, standing next to the President grabbed him around the middle and half lifted him out of the tank.

He was even more surprised when the President taped the medal to his broad flanks.

But the real moment of pride came later when the new space cruiser blasted out of its berth for its maiden trip Out.

Mack was swimming in the spacious control tank—Captain Mack of *The Dolphin*. Anaka was there in the No. 2 spot, helping the crew get used to Mack.

It didn't take long.

Before they passed the Martian orbit, they had dropped the formal "sir" and just called him Captain Mack.

Mack liked it. So did the smaller dolphin who swam in the extra-large tank in Mack's quarters. They called *her* Mrs. Mack. **END**

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## In the December Worlds of Tomorrow

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# PERSONAL MONUMENTS

BY THEODORE STURGEON

From my throne here in the center of the universe, I took issue with a recent survey of science fiction, saying it was a pity not to have mentioned a certain half-dozen writers who had influenced the field. A faint rumor is going around that these six don't cut all that much ice, which is manifestly absurd—as much so as the implication that there are other universes besides the one which revolves about this chair.

Seriously, we do indeed perform many or most of our own definitions, and for me, science fiction could hardly be what it is, and what it has been to me, without these six—in addition, of course, to the Hugo's and Heinleins, the *Startlings* and Stapledons, and all the other fixed stars in the sf firmament. These six were mentioned, not because of literary gigantism, not because you and you should burn offerings before their ikons, but only because sf

could not be what it is *to me* without them. As you'll see, their status in my cosmos is personal and/or professional. I stress again that I trouble to mention because they have been structural in *my* sf—not necessarily yours.

*A. J. Budrys:* In his very early twenties, Burdys produced a number of short stories each of which concerned, to greater or less degree, old people. I freely confess that I don't know as much about *anything* as he did about old people—the wistfulness, the scar-tissue, the compacted conservatism—and the distilled knowledge that only a life-time of living can endow. There is at times an unleavened quality about his writing, which may be, for all I know, only consistent with this phenomenal percocity; for all that, it is my considered opinion that Budrys, should he care to travel that road, has the material in him for lasting greatness.

*Nevil Shute*: Not only a perfect journeyman nuts-and-bolts writer—one who does his homework and uses all his tools—Shute is to me the most perfect example of the general public's blind-spot concerning sf. If many sf writers have slightly paranoid feelings, it's because a readership which can readily discriminate between *Shane* and *Hopalong Cassidy*, between Graham Greene and Mickey Spillane, doesn't and won't learn the difference between the top ranks of sf and the funny papers. If *On the Beach* had been written by Edgar Pangborn (but then he wouldn't; and if he did, he might not have been able to sell it to any magazine in the field) no one would have heard of it. If Shute had written *A Mirror for Observers* (but then he couldn't) it would have been made into a Class A movie. In other words, any mainstream writer can get away with mediocre sf. Great sf tends to stay right in the clubhouse, even when it outranks its contemporaries in every other field. Why, most of the people who buy this kind of thing don't even know they're reading science fiction; *Fail Safe* is a sf novel; so is *1984*, and *Seven Days in May*, and *Advise and Consent*, and any other work which takes current knowledge and extrapolates it to probable or possible ends. (This, by the way, isn't my definition of sf—just because it isn't all that sf does.)

*Edgar Pangborn* is, then, Shute's mirror image in this matter. Go find *A Mirror for Observers* if you can and wonder with me how prose so polished, pacing so skilled, could with

justice ever have been allowed to slip down the *oubliette*.

*William Tenn*: It would be too wide a generalization to say that every sf satire, every sf comedy and every attempt at witty and biting criticism found in the field is a poor and usually cheap imitation of what this man has been doing since the '40s. In addition I owe him a great deal personally, for his incredibly involved and complex mind can at times produce constructive comment so pointed and astute that the fortunate recipient is permanently improved by it. Admittedly the price may be to create two whole categories for our species: humanity, and Wm. Tenn, for each of which you must create your ethos and your laws. I've done that. And to me it's worth it.

*Vercors* acquired this single name, if I remember correctly, in his days as a lethal journalist in the French Resistance. Most of his work reflects an almost unique ability to drive to real basics and subject them to scrutiny and analysis. The one book which affected me the most, both for content and method, is *You Shall Know Them*. The simple narrative situation is the discovery of a species, deep in the Outback, which is either a superior ape or an inferior man. Which it is presents the problem. Those who wish to train the creatures to work in mills and factories say they're animals. Those who feel otherwise set up a powerful counterforce, most of the power being in noise and indignation. The protagonist decides to have the matter proved, and in his laboratory in England he personally impregnates one



of the females (let me add here that this simple fact, when gossiped around, horrified potential readers by the million, and probably cost the book its rightful place. Please tell your Aunt Amelia that the process was clinical, unromantic and performed with instruments) and when the offspring was born, he killed it (painlessly, Auntie) and then phoned the police. Now if the creature was an animal, so what? But if it were human, he was a murderer. Therefore: go to court.

Vercors wrote this book around the (to me) shattering discovery that never in any literature, in all its history, has there been a true definition of Man. Descriptions, yes. Genuine definitions, no. He also pays the kind of tribute to the English courts which Joseph Conrad paid the English language; both men had adequate knowledge and experience to choose among many. He felt that the one place on earth where such a definition could be winnowed out was in an English Court of Law, and the bulk of the book is the trial transcript; and I'm not about to tell you how it comes out. What's important here is a matter of definition too. Here's a towering example of what sf is, can be and should be: an exploration of mores, attitudes and motivations, as well as science, clear down to bedrock so basic that it bears on every human being who ever drew breath. There are few expressions heard or read which have had such an impact on me; that I bewail the lack of a mention for this author is probably

this difficulty I keep having that you think my universe isn't *the* universe.

*Tom Godwin* is a name which possibly won't be found graven on granite three millennia from now; yet one story (of the many competent ones he has written) was another personal blockbuster. *The Cold Equations* is an extremely simple statement of the fact that natural law is to be used, not broken. A scout ship on a mercy mission upon which several lives depend is found to have a stowaway. Due to the unbendable strictures of the situation, the stowaway must be thrown out or the ship will crash. Concededly, Godwin makes the most of the situation by having the stowaway turn out to be a pretty girl in her teens; aside from that, there's nothing in the story that isn't straight, clear and uncompromising. The human equation is of course agonizing, but in terms of the real problem it is meaningless. The solution to the problem is so clear there is no choice; so it isn't at all a problem-and-answer story. It is that great rarity, an unequivocating examination of a real situation. The fact that such a situation has never exactly occurred is quite beside the point. And ever since I read that story, it has made itself a category and an aim. This too is what sf is for.

It might be interesting to see what other writers (and readers, too) have to say about their special personal monuments—those which have been obscured by the public skyline.

END

# SCIENCE - FANTASY CROSSWORD PUZZLE

by JACK SHARKEY

## ACROSS:

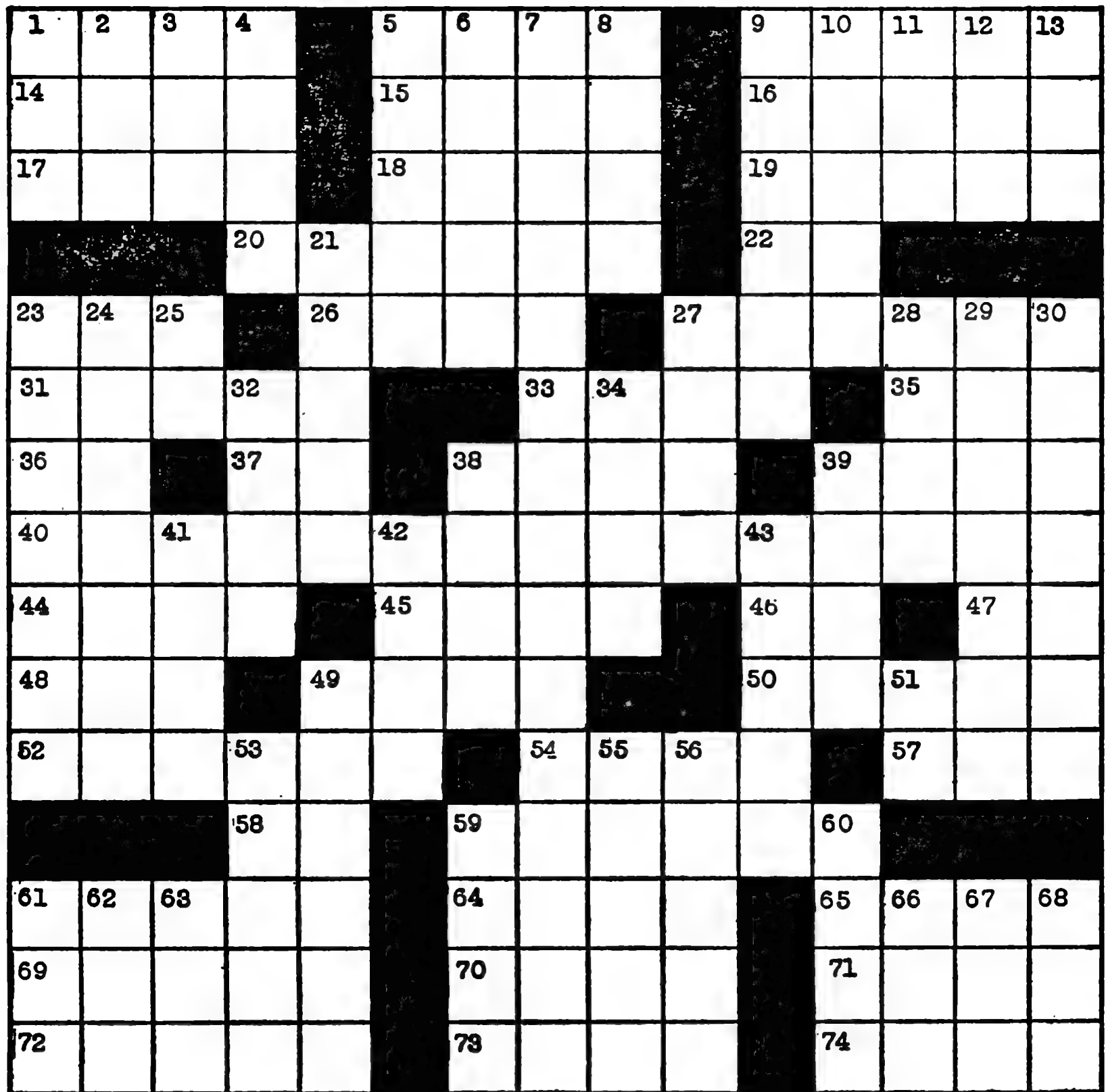
1. Perfectly harmless unless smashed
5. What ballistic missiles travel in
9. Certain mate of a sea vessel
14. Given a chance, it will grow on you
15. Turns red in a current
16. *Per aspera ad* \_\_\_\_\_
17. Fantasy-writer factions could use a few more
18. A free drink in Mexico
19. In France, you drink your cafe in one
20. What some pigeons insist on doing
22. Sports car
23. The Atomic \_\_\_\_\_
26. What vampires do all day
27. A Roman emperor who should have listened to a soothsayer
31. The inventor of dynamite
33. A school and type of jacket
35. A Spaniard cheers for a Swede
36. "\_\_\_\_\_ else!"
37. "Get a look at that!"
38. An urgently important social event in school
39. A popular vehicle in our 49th state
40. What Flash Gordon's ray pistol is responsible for an awful lot of
44. Miss Chase, of the stage and movies
45. Famous also-ran
46. First of last three words spoken to his best friend by #27 Across.
47. "\_\_\_\_\_, c'est l'amour!"
48. One hundred fifty-one Romans
49. Half a comic dance duo; name of a lady spy
50. If you haven't got neon, argon, or radon, you can always fall back on—
52. A chinese boat; Mister Spade's face
54. You fight a *toro*, or milk a \_\_\_\_\_
57. What you hate to see a good story do
58. Safest locale for rocket pilot when his

- ship is between planets and he has no space suit
59. You say werewolves have hairy faces; scientists say they are \_\_\_\_\_
61. What the U.S. hopes to land on the moon
64. Pertaining to the ear
65. What a test-rocket sled runs by
69. What flowers lose on the moon
70. A block of salt for cattle
71. Form of some alien monsters
72. Evil spirit
73. Crewmen on long rocket runs could play some \_\_\_\_\_-deucey
74. If heroes practice virtues, villains commit \_\_\_\_\_

## DOWN:

1. Measure of electrical power
2. If the heroine goes to Mars, the hero goes \_\_\_\_\_
3. A Swede yells his name at a bullfight
4. What a drunken hero may get caught in
5. "What's in \_\_\_\_\_?" (2 words)
6. Man's name meaning "of the king"
7. A kangaroo's legs, a rocket's engines, and a witch's broom are each, in their own way, \_\_\_\_\_
8. What you better not do to a space suit on the moon
9. Robin's best friend
10. A southwestern tribe
11. Avenues or holy people (abbr.)
12. Nickname for Big Dipper; Latin stem for bears
13. The man from Aberdeen says he won't
21. A leading miracle fabric
23. Name for specialized study of anodes
24. Type of warfare young Tarzan was involved in
25. What Scrooge's close friends called him





27. Not dead nor asleep, but in-between state  
 28. How to fly a one-man spaceship  
 29. A delicate kind of lace  
 30. What Mars is covered with, mostly (2 words)  
 32. Charles Lamb's pen-name as essayist  
 34. The unlucky spaceman managed to #8 Down his spacesuit, and it ———  
 38. Flammable earth used for fuel  
 39. After three days in space looking for the landing field, it was really a ——— for sore eyes  
 41. What incoming spaceships do on the upper atmosphere  
 42. Word used in comparing different objects  
 43. Our second-largest state  
 49. A product you won't need on inner Mercury  
 51. The compass direction of Chicago

- from Albuquerque  
 53. Beach in California  
 55. Young girl who talked to chess pieces and playing cards  
 56. What the villain always is, just before he gets blasted.  
 59. Miss Negri of silent-screen days  
 60. Units of force or power  
 61. What some hardheads still think science-fiction is  
 62. What SF fans feel toward those hardheads  
 63. If "Romany Life" is about gypsies, then a gypsy must be a ———  
 66. Name of a man who learned how to get into the cave of certain Arabian thieves  
 67. Traveller between anode and cathode  
 68. If you weigh a few oz. on Earth, you'll weigh a few ——— on Jupiter

# THE COMPETITORS

BY JACK B. LAWSON

ILLUSTRATED BY NODEL

***He knew a robot was only a tool  
to be used by men. But the big  
question was — who was using who?***

I

The fast, silent way it crossed the room wasn't just efficiency. It was an insult or, more likely, a challenge. As if crossing rooms without making a noise were some kind of game: Now you got a turn.

Questions Controller Karl Paker, who by regulation had to rise and greet even robots a courteous three paces in front of his desk, remained

squarely behind it, thoroughly seated and—in his mind anyway—swollen with hate. His bones, God knew, made noises enough, what with the accumulated frictions of fifty-five too-busy years. More, he limped. He wasn't going to give this thing a chance to listen and watch.

The next instant he saw his mistake. You have to *move* to stay ahead of robots. Ahead morally, that is; physically you can't hope to as





much as stay even. This one took and turned Paker's insult. Finding those last three steps open it took them, then seated itself on the corner of his desk.

Paker couldn't breathe. Something went wrong in his throat. Pushing back his chair a little and gripping the arms he regarded his visitor—to all outward appearance, a handsome, rather slender youth of about twenty, smooth-skinned and bright-eyed. You could tell it from the human only by its too-perfect humanity.

In his mind Paker took the bottle of Earth cognac from the bottom left-hand drawer and, swinging from all the way back, christened that faintly rose right cheek good and gory. Or greasy, since that was the best it could do. But the very delicacy of its coloring somehow warned him that the three-hundred credit bottle, and not his visitor, would be the one to suffer; what he had to deal with wasn't so much cheek as it was brass. He sank back and merely glared at the drawer handle.

"Well?" he said when his throat was working again.

The robot gave him a youthful smile, though the thing was maybe three times his age.

"I am R 391," it said. "However, you may call me Rob, or even Robby, if you have the appropriate personality-index. I am a human factors coordinator for this region. You are the Questions Controller and I am here at your request."

"Yes," said Paker, not looking up. "Well."

But he could face up to things, even things as humiliating as this.

"Look here," he started over, now meeting the robot's eyes—or whatever it wanted to call them. "We need help. I evaluate the questions. There seems to be only one of any promise, even if I don't like it. So I'm asking: Are there conditions under which the robot kind would agree to help us?"

As soon as he was done saying it he dropped his gaze back to the left bottom drawer. Cognac might not be a club, but it would make an awfully comfortable hole to hide in.

After all, he'd gone into questions control work some twenty-seven years ago because it seemed the one area where human beings had it over robots—in fact, had to have it over robots to survive.

Well, not survive, he thought. Robots would look after humans to that extent. Otherwise, where was his purpose, But in the present furiously competitive expansion into space, the only edge robots didn't have was in questions: Men could ask new ones, robots couldn't.

And when you got the questions, the best you could do was ask the robot for help. Oh, yes. He'd need a lot of cognac to hide the taste of that.

"'We' means more humans than you," observed R 391.

"Me," said Paker. "The three thousand human beings left in this region. And lots more, maybe even the thirty billion all over the galaxy. We're in a real hole."

He waited, but it was silent. Dramatic pauses never worked on machines. "We've lost two planets." He



rose, limped to the filing cabinet by the window. Let it see the limp. Here the thing wasn't sitting on top of him anyhow. "I've got it all on tape for you, since that's the quickest way. But it might help if you heard it from a human too; tapes are computer-filtered. Out there around OC4O, just seventeen light years and four months from where I'm standing, there's a nice Earth-type world, exactly the sort we've got to have if we're going to prevent . . . " He paused, blinked.

"—to prevent our taking over. Yes. Human policy is no secret."

It wasn't. Or if it was a secret, it was an open one. If robots got the stars, as they were already getting two thirds of them, then you had no place to go. You would have to live in houses not out in the open, and when that happened you were lost. Robots were such damn good housekeepers.

"Anyway, in due course we went down on the planet—Baggins' world. Too fast, of course. There's never enough time to prepare things right, if we're going to stay ahead. And we couldn't let your kind have that world. Why, a man could almost walk around there in the raw!"

He faced the robot, which was still perched on his desk as if that were the only comfortable seat in the room. "Planets that congenial aren't easy to come by, you know. Trouble is, somebody else already lived there. An *intelligent* somebody."

Paker thrust out his hands—half fight, half appeal.

"Maybe you can figure how we felt. There are lots of more or less intelligent animals in the universe, but until we got to Baggins' world nothing in the human class. It was like when you've been on a scout ship for a very long time, just yourself all alone, and then you make planetfall and suddenly there are other people talking too. That's how it's been with the human race, except for you greasers. Well, we could talk to Bagginses, or almost, though they didn't seem quite right—"

"You mean they are not human."

"Maybe something like that. Only you're not human too, and we can talk. What it was with the Bagginses, they didn't seem to have any ambition." Paker considered briefly. "We went down. I should explain they're underground, and they were willing enough to let us have the surface. Which we already had, for that matter. Anyway, there don't seem to be many of them, they're only under this small part of one continent. No ambition, like I said. Not quite right."

"Well, that 'not quite right' turned out to be plenty wrong. One of our teams located a fantastic vein of radioactives and sank a mine. It's not often you can mine radioactives in a habitable system. Well, I guess you could say mining in that spot was out by the treaty, but it was inevitable. They ought to have seen that."

"The vein happened to be the gut of the Bagginses power system. Nobody knew they were that advanced! Of course, they misunderstood. Turned out they have robots too, only ones that follow orders instead of trying to steal the universe out from

under your nose. They burned us off the planet." He made a face. "You know what would happen if I tried to play chess with you?"

"I would win. Chess is no competition for us."

"Yes. Well, that's how it was. They aren't better armed. As a matter of fact most of their weapons are copies of ours. But they took us, and made us look easy. Then they sent their machines out and they took us on Robinson's world too. Either they already had a stardrive and hadn't bothered to use it before, or else they worked up one like that—" he snapped his fingers past his ear—"so as to come after us. Two Earthweeks ago their machines hit Columbia, a strong, well-established colony of almost three thousand people, and they made that look easy too. We're no competition, as you put it."

Paken went back to his desk and, robot or no, sat down, opened that bottom left-hand drawer. He hesitated, but the consequences of his last discourtesy were right there in front of him, practically bolted to the desk-top. Knowing how silly it sounded he said:

"I need a drink. Will you join me in one?"

"Thank you, no," said R 391 and, amazingly, left the desk to go sit in the chair it was supposed to.

After the first flush of relief, Paker wasn't sure this was better: It had such a hideously tidy way of sitting. When he had poured the cognac and placed the bottle carefully on the spot where his visitor had perched, simply—as he told himself—because

that was where he *wanted* the bottle, he said:

"I was inaccurate at one point earlier. I gave the impression that the Bagginses are in our class. But the right way to put it would be to say we're nowhere near theirs." Then he took the first sip of cognac. Now he had said it, now he had really said it all.

"I cannot accept that," it said, using that unspeakable courteous voice robots always used when they were saying something that might offend you. "Animals of the sort your account suggests would not be your superiors in any meaningful way. They should be the reverse. However, I will be able to appraise their capacities more accurately after I have done the tapes. Now I can say only that if the situation is much as you've described it, we will probably decide to help."

"How soon can you say?" Paker asked, a little too eagerly. "They may decide to hit here next."

"Shortly. I should like to use your private bathroom, please."

Paker opened his mouth, but nothing was in it to say. Cognac cost too much to spill, so he got the glass down properly, and then the shock started coming out. He began helplessly and horribly to blush. He could feel it go all the way down to his navel.

"But!" he yelled, trying not to. "I mean, surely you *don't*!"

"I must communicate," said R 391, in the same easy, courteous voice. "I prefer to do it in private and in pleasant, mathematically neat surroundings."



While it was gone he put away a good thirty credits' worth of cognac, but his sense of outrage burned right through the stuff. There were places robots should have absolutely no business. He felt that strongly. And he found that, try as he would to stop it, his mind insisted on showing him, like a set of smutty playing cards, pictures of that thing in his bathroom.

And God alone knew what it meant by "communicate." Certainly only a robot would think it was the sort of thing you did in private—or in his bathroom, with the door locked. For he'd heard it lock the door in still another burlesque of human modesty.

"Well?" he said angrily when the door clicked again and it returned.

R 391 stopped before reaching his desk and struck a parade rest—a position human beings took because it was comfortable if you had to stand in one place a long time, and because, if you were human, you always had this problem of what to do with your hands. The posture infuriated him still further because neither problem could occur to a robot, ever.

"Yes," it said. "You *are* in a hole, as you put it. We will help you."

Then it said something else and he said, "What?" because he didn't quite hear. But he wasn't really asking. He was too taken up with the relief gushing through him, as if his blood had only this instant started to flow.

Robots didn't lie. From an en-

gineering point of view they considered lying complicated out of all proportion to the uses it might have, and simply didn't build in the necessary circuits. So if this one said they would help—they would.

He hadn't till this minute believed it; their business in the universe seemed to be making things hard, not easy. But they were going to help! "What?" he said again, more to hear that repeated than to hear something new.

"I said, I can tell you a good deal about them."

"Them?" he repeated.

"I mean by 'them' what you call the Bagginses. I have just gone through the entire file on Baggins' world."

"That's nonsense," he said. "You can't have."

"We investigated the species some three hundred Earth years ago. I will tell you about them, because it will be good for you to know."

"Good?" he said. "Look here, what have you been doing in my bathroom?"

"I have been communicating," said the robot stiffly. The trouble with their voices was you knew every bit of expression had been put in deliberately, by choice. But expression wasn't something you "put in." It was part of the organism's total functioning, like a yell of pain when somebody stepped on your foot, or the way blood rushed to the bruised spot.

"In *my* bathroom?" he said. "That's outrageous!" He didn't quite know what was outrageous, but something was.

**"The Bagginses,"** it said, "are a machine-dominated race. I was right, incidentally, in saying that they were in no significant way your superiors. The right conclusion to be drawn from the way that you were outgeneraled on Columbia and Robinson's world is that the machines you fought were controlled through subspace by a master brain back on Baggin's world. You had no chance."

"What you mean is that their machines take orders from them," said Paker thickly. "Instead of going off on their own hook. That's what you mean by machine-dominated."

"You have an excessively belligerent attitude," observed R 391. "You should remember that under too much stimulus circuits burn out instead of operating. What I mean by saying the Bagginses are what must be called a machine-dominated race is that their civilization is oriented around machines. The Bagginses discovered about three thousand Earth years ago that their emotional needs could be entirely satisfied by directing an electric current to a nerve complex at the base of the eye. Your kind once made a similar discovery but have escaped its consequences. Their civilized development stopped. Automata do the work, but, as you observed, have not been structured to permit independent judgment. This is another indication of the Bagginses' compulsive need for security, a racial drive whose origin the investigative team could not determine."

"Compulsive, hell. It just shows they're smarter than we were."

"You are mistaken. Moreover, we

can predict with a high order of probability that this need will lead them to seek out and destroy humankind wherever you may happen to be. We would rather not have humans eliminated from the universe; therefore we must join forces with you in this region until the Bagginses have been destroyed. Their destruction should take, with luck, no more than two Earth months."

"Just like that, eh? You feel sure of yourselves, don't you?"

"I am sure my feelings are what they should be," replied R 391 precisely.

Paker put his head on the desk, even though the other was still regarding him from that idiotic parade rest. Robots claimed to have feelings, but he intended never to believe it. There had to be limits. He sat up again, put the bottle away, slammed shut the drawer. He intended to be on his dignity now.

"I don't know about that," he said. "But if you're so great on feelings, you must at least know what it feels like to be humiliated." There he hesitated, for it came to him that probably wasn't true. When would a robot be exposed to humiliation? "Anyway," he went on, "you ought to know what making a request like this does to us. We're fighting you—or would be, if that weren't hopeless. At the least we're in a race with you for the galaxy. We wouldn't be out here except for that, overextended and unprepared as we are. It's mostly your fault. How do you think it feels to come begging you the way I've done? You might have spared me being on my knees"



R 391 broke out of his parade rest and gestured sympathetically.

"You misunderstand," he said. "Speaking your way, I do not want you or any of the human kind on his knees. I want you rather to stand on your own feet more. Thus, what you have said is absurd."

Paker rose, limped around the desk "That was cruel," he said, standing in front of the thing and close. "A robot did this to me. One of your heavy models, not looking where it put its feet."

"I know the story, and you have not said it accurately. MK 30 has large feet, requiring fifty square decimeters of surface, and when gravity came on there was no place else to put them. I also know that you could have the defective part replaced."

"It's not a part. It's *me*."

The robot regarded him without expression, as if he hadn't spoken yet.

"All right!" It was Paker's turn to sit on the desk. "But a man's entitled to some privacy. It's my bathroom."

"I was communicating, as I have already told you. Subuniverse 12, which you may not know about yet, as human minds are too confused to make use of it, is a cosmos consisting of abstractions or forms, the stuff of pure thought. Mind enters it in the same way a starship enters Sub-U 3, except that one has only to think a pattern to create the reality-warp, so one does not need sunfield generators. However, one does need complete freedom to concentrate,

and I prefer not to turn off my sensors around humans: That is bad manners. Also, humans with derangements like yours have been known to attack exposed robots."

Paker looked away.

"Well?" he said. "So what are we going to do about the Bagginses? What's this two-month miracle of yours?"

"Our records are three hundred years old, but a civilization such as I have described is necessarily static. The mind synthesis in which I have participated suggested that, considering the fact that these animals have not empowered their machinery with independent judgment, the vulnerable spot should be in the animals themselves."

"Just the point you things would fix on."

"The problem then becomes one of finding a way to deprive these animals of independent judgment. The surest way, on the basis of the information at present available, seems to be to destroy the animals entirely. They cannot make decisions if they do not exist, and without them their machines are harmless."

"'Trust a robot to state the obvious,' " quoted Paker. "You are right now up to where I am—where we humans got, I might add, without even thinking about it. The question is, where do we go from here?"

"I go to Baggins' world, if you can provide me with a probe-class ship that is small and fast enough to land there without being detected. If you cannot, then I go to Betel 4 where my kind are readying such

a ship, and then to Baggin's world. You," it added conscientiously, "are the one to say where you go, but I can think of no reason for you to go anyplace out of the ordinary. No human needs to change his plans. I will take care of this problem."

Paker stopped before saying what he wanted to. "We're involved too! I would like to know your plans so as to think about ours. We make up our own minds, you know."

"Once on Baggin's world I shall try to destroy all these animals. You complained that I was stating the obvious."

He clenched his hands. "Like that? You'll wander around and pull their heads off or what? You're just one robot, and these creatures by your own admission are a danger to the whole humankind. After all!"

R 391 was silent.

"Plans that are not known cannot be anticipated," it said at last, making that deliberate, youthful smile.

He felt the blood coming back into his cheeks and stood up, walked around behind the thing. He was looking out the window at the sky. It would darken and then turn somehow thin, and darken again. He felt something in him—some moral quality—tighten, and suddenly and agonizingly twist back on itself, the way a leg will go suddenly bent and hard with cramp.

"I see," he said. Unhappily, he did. What the thing had said was right, even if having it said was intolerable. "Well, we can provide the probe-ship. Happens I own a

modified bug. My plan is to go along." He hadn't planned that—hadn't, in fact, planned anything until he said it, but now he found himself suddenly committed. It was his ship. "That's my business, I expect, just as what you intend to do is yours."

R 391 rose and came around and considered him.

"You are old and lame and of doubtful usefulness." It was using the polite voice.

Karl Paker smiled at it.

"I can hold my own," he said. "One thing, I know how to disable a robot of your model. Even with its sensors on."

### III

But disabling the thing—even during the time when he could have done it—wasn't the problem. The big problem was holding his own.

Over the next two Earthmonths he learned how far claiming he could took him, how much that easy remark committed him to.

Paker tossed another chunk of vegetation into the fire and watched the stuff try to crawl out. You would never think that messy green tangle could move unless you tried to burn it. But there it was, scrabbling wildly at the six-inch wall of earth R 391 had put up to hold his fires together.

Perhaps, for that matter, it couldn't move until you put it in a fire. God knew he himself had been doing things for five weeks now so far outside what he could, that in the nor-



mal course he wouldn't even have tried—all in the name of holding his own.

"Robot!" he called, when the vegetation stopped struggling.

R 391 was sitting on a rock some twenty feet away, wearing a green sportshirt in forty degrees of frost. But its nose was red, as if with cold. Paker wondered a good deal about that.

"I hear you," it said.

"It's fifteen hours, Earth. time. Your two months are up."

The thing regarded him.

"Well, they're still kicking," said Paker, shifting around so he could reach the farther pile of vegetation with his lone hand.

"We have failed. I thought that you already knew this."

"I did."

"Then I do not understand you. You must have been aware of the fact that I already knew it."

He was too cold to laugh, but he could still make the right face to go with the kind of laughter he was thinking.

"I expect I knew that too."

"Then there is something wrong with you. As I have explained three times now, communication is an asymmetrical relation with respect to the information communicated. Thus, if you—"

"I've had about enough of your communication," broke in Paker savagely. "That's one word we could do without." He threw a new lump into the fire. "It's not as if you were always saying new things yourself all the time. Oh, no."

"Perhaps you need a new trench,"

observed the robot. "Though I dug the last one only five days ago. If you would not eat so much—"

"I eat to stay warm!" he shouted. Then he sat back, bracing himself on the plastic sheath where his right hand had been. He tried to stop jumping inside. How many times had the thing said something like that over the past week? Something that, if you could believe a robot could want to, had to be a calculated attempt to goad him on?

A robot's mind didn't work by free association. If it got from the idea of communication to the idea of his trench, it got there according to a strict deductive order. In which case what were the postulates? Was the general idea to irritate hell out of him? He couldn't quite believe it had that in mind; but just in case this was possible, he was going to remain very calm.

"What I mean is," he went on, to be saying something, "where do we go now? What next?"

"You should die within fifteen or twenty days, but you may last a little longer. Predicting humans in this respect is difficult. When you are dead, I shall turn myself off."

"After you've had the fun of seeing me go . . . I wish it had got us."

"The hovercar machine probably had orders only to protect the young animals, as I have explained repeatedly. When we no longer endangered them, it forgot about us. Such machines cannot decide to do something on their own."

"So turn yourself off."

"I will not be rude."



Paker considered its nose for a while, then went on. "Why do I waste my time talking to you, I wonder? Two Earthmonths ago I would have crawled through fire first."

"Humans are language-structured," explained R 391 "You are under stress and require the consolation of jabbering. However, you have not listened to what I say since I fixed your arm."

"But you say it anyhow. Why? Just so I can hear the sound of your pretty voice?"

"I try to think of what I say as though I were your mother, but perhaps I make mistakes. Working with metaphors is difficult."

Paker kept very still for a moment.

"Some time you'll go too far," he

breathed.

"I shall not go so far as off this planet, in all probability," observed the robot. "Still, unlike you, I can always be switched back on." It executed a different, brotherly smile.

Paker turned his back in spite of the cold. In his imagination he could see the landing party—robots, probably—stuffing his stiff form into a black undertaker's bag and bringing back movement to R 391 by turning a switch. Of course, if they were robots they wouldn't have a black bag; but that was what he saw them using all the same.

The worst part was he couldn't blame it for their failure. Not honestly. Animals, as the thing had explained once they were down and far enough away from the *Hermes* to be safe, were convenient to destroy not





only because they damaged easily, but because once you killed one it couldn't be turned back on or its parts used over. Which made sense.

So what was the problem? You asked where the animals were most vulnerable, and how you could go at them so as to be sure of getting them all. Logical questions, both. The sort implicit in the information you already had, the sort a machine not only could ask but could ask better than a man. The answer was logical too. You hit them "where the new animals are made." Because—as it had politely explained when he told it the facts of life—machines were superior lovers; if your lover was electric, you didn't bother with sex. You turned over the problem of reproduction to specialists.

Paker's left cheek was going stiff.

He faced back to the fire, throwing in more crawly stuff. No, the plan was all neat and logical, even now. So logical that any good mechanical brain could work it out, as he had one good not-hand to prove. With his teeth he pulled the glove off the other hand, the one he still had, and began to massage the rubbery cheek. You could put that in the fire and it might start crawling too.

But not a robot. It just switched itself off. Once you were politely dead, of course.

"I'm beginning to see why you things don't own more of the galaxy than you do," he called — even though R 391 could hear him whisper, as he perfectly well knew. "In spite of all your advantages, you're quitters."

"I have explained the situation to

you, but you are sloppy inside and forget things. You may use whatever mathematics you like to describe the problem, and I cancel out in every case. The Bagginses' master brain can coordinate more data than I, and it incorporates similar structures. As I cancel out, in the relevant sense I do not exist. You cannot say of something that does not exist that it is a quitter."

It really meant that, Paker decided. That was the trouble with a mathematically precise language. When a robot went wrong, it went all the way. A human managed to spread out the error—just because the language was sloppy. Like human minds; something you could never quite trust.

But something that could meet change, too. As a sloppy human you were always up against something new, and had to keep your meanings loose to deal with it. So you could *mean* something new. You could make meanings; that was the secret of good questions. But a robot could only work over things until they fitted already established meanings, and, if that didn't work, give it up.

"I still itch in the hand I don't have," he explained. "I even try to use it."

"You will tell me when these attempts begin to succeed."

Paker looked up. "You miss the point," he said, but despaired of making clear just what the point was. That was how it worked: You said something you didn't mean or understand even, and then you had to *create* a meaning for it. "I mean,"

he tried, "we're here and damn it, it's cold. We ought to do something."

"I am still here," observed R 391, "in the sense of being able to dig trenches, to lift heavy objects or to lay fires. You can do small, simple things like opening food sacks."

Paker was quiet, since one thing he couldn't do any more was take out an R model.

"I suppose I'll have to put some kind of gadget on that stump," he said into air. "I don't like it, but it's too unhandy without."

"That is true."

He glared at it. "Look here. Why don't you go away? That's something else you can do. If you went far enough away you could turn yourself off without being rude, you know."

"You would freeze." It got down from the rock—a handsome twenty-year-old whose breath didn't frost at minus forty. But it had a red nose.

"Look," it said, squatting beside him and extending a right hand complete with fingernails and light brown hairs. "Your kind cannot make one so good. This is an efficient model. If you were equipped with one you would not even want to go back to the organic sort, it would seem so much less useful. For example, with this you would be able to hold together the materials for a fire while it got started well, without being burned." It flexed the fingers at him. "I would like to go away and switch myself off. I have no purpose here worthy of the name, and I am unhappy. But while I have this and you do not, you are dependent on me and I must remain."

"Oh, unhappy," said Paker hutch-

ing from it a few steps around the fire. "Go on!" But God knew he was dependent on it—not just for creature comforts, but for survival. Or would be, if he had any chance of surviving.

"You know," he brought out, "I may not have two good feet to stand on, but one hand is plenty to sit on."

"You have made another of your nonsensical remarks," said R 391 in a gloomy voice. Of course, a voice like that was calculated, but with what intention? Did he really care what its intention was? It was trying to do *something* to him, anyway.

"What I mean is," he said, "if I'm here to die, I can do it all by myself. I don't need your help. If I could turn you off it would be in the bag and—" and there he stopped, because he was thinking of something else now.

He saw a way.

"Listen!" he told it, shouting over a distance of two feet. "Think of yourself as a Baggins machine." He paused for a moment, because that was a pleasant thought. "And humankind is this green stuff you've got to hold down while it gets to burning. Now if we take away you, I — I'm the Bagginses, I guess — freeze to death, isn't that right?"

"I do not know," said R 391 in a minute. "Thinking of these three entities this way is awkward."

"We should have known from the start! Of course! The thing to do is hit the machinery!"

"Destroying mechanical lifeforms is poor strategy."

"The brain, robot! The master brain! And, stupid, you didn't think of it!"

R 391 inspected the fire for a minute. Then it put its face through a complete smile.

"I almost might have predicted that you would think of such a plan," it said, when it was finished with the smile. "It could succeed, however."

"And you didn't think of it," repeated Paker, who was quite warm now, even to the ends of all his toes.

#### IV

But after that he wasn't warm again for so long it might have been forever. They marched crosscountry for three days to reach what, on the three-hundred-year-old map in R 391's brain, looked like a good point to dig into a tunnel complex, and all that time they had no fire. Every four hours R 391 halted. They would stare at each other while the stiffness sank into Paker's joints and his breathing came back to normal; then they were jogging on again.

Paker didn't ask for the halts. Hadn't he said he could hold his own? But he knew R 391 could have gone the whole distance without stopping, and every four hours he took the break without a word. It wasn't enough, of course; perhaps that made it easier to take.

But he knew.

For the rest, he depended on medicines to hold his own—the little green pills that would clean his



blood, let him go on, on, on, without sleep; the white pills when his balance got too shaky; the purple pills when he needed spurts of energy; the bigger white pills whose use he had forgotten. He didn't have enough, and he was counting the precious green ones again, trying to make the count come out slightly higher, when the robot said, "We will dig here," almost casually, as if it were telling him the world was a small place, wasn't it? He staggered on another thirty steps, counting helplessly. Then he got himself stopped and turned around, and then he dropped.

He sat and watched the thing sink into the ground without so much as pretending he could help—in spite of its "we." His underwear was supposedly good for fifty degrees of frost, but that wasn't true. He was brittle with cold. Was this the planet he'd claimed you could go around on in the raw?

Then, without knowing how, he was somewhere in the dark leaning on a too-human shoulder and he pushed away. That he hadn't been going to do. He wanted to cry, but he couldn't do that either. It was warm again, all except his soul, and suddenly on his left he heard harsh breathing. The robot brushed by him, moving fast, and he heard a fuzzy sound and then a sharp *crack!*

"What was that?" he said, but couldn't control his voice and it came out only one vowel, a sort of nasal bubble. Perfect fingers gently pressed against his mouth. He had to hold in hard not to bite.

They went on down. It was never

possible for him to lead, but the plan was his, so he was leading in that sense. More, he was taking care of himself now, even if his bad foot came down too hard now and then. He could hold his own. After all, they'd been in the tunnels before...

From time to time they passed vague little clouds of pink light along the left wall, clouds dilating and contracting regularly, like a heartbeat. Once the pink flared out as he went by and he saw a square, naked compartment, and in the far corner something—more a mass than a shape. It changed and uttered a noise of some sort.

Then he was past. Had that been the enemy? But what was the noise it made? A moan of pleasure, maybe. He had seen pictures of Bagginse: small, brown-skinned, wrinkly-looking creatures almost like elves. Miraculously close to the human. You wanted to talk to them. You could talk to them, if only a little, and there was the true miracle. In all those centuries of exploration and expansion humankind hadn't found anyone else to talk to, not counting robots. And of course you didn't count robots.

But he didn't want to talk to *that*.

They went down, on what seemed to him a long spiral, and there were no more pink lights. The darkness sank away for a long time, always curving a little toward his game side. The robot was leading him by the hand now, as if he were a three-year-old. With his other thumb—the one he didn't have any more—stuck in his mouth, probably.

Suddenly they were in the middle of a great hissing. Up ahead was something giant that filled up the black, coming at them.

He was flung flat against the wall. Breath went out of him; the hissing rushed up to a roar all around. He was sick and desperate trying to breathe, the air pulled from his mouth. The robot held him flat. There was no room; he had to bend over.

Then he was breathing and the darkness was clear again. The hissing got smaller up the way they had come; abruptly what must be a bend cut it in half.

"That was a hovercar transport," explained R 391, speaking, incredibly, in a normal voice, so that for an instant the darkness seemed to jump at Paker from half a dozen places. "We are close to the difficult part of our mission now. Thirty-four meters ahead, if I have measured accurately, is the conveyor belt which that transport just left. I do not know how fast the belt moves. However, seventy kilometers distant in the direction of its movement, the belt should pass a wall on the other side of which are located the control circuits to be destroyed. The belt is the best approach, according to my map. You are tired, and you are in a comparatively safe place. I will go on from here alone."

Even at five or six inches he couldn't see its face, but he suspected it was doing the boyish smile: Go suck your thumb, old man. This calls for youth—or metal. Paker passed the wrong hand over his face; his mind lurched a little.

"I can manage." He said it without expression, fighting the heaviness of his breathing. But he said nothing about holding his own. That was behind him now.

"I cannot undertake to be responsible for your safety once I am on the conveyor belt. I will be busy with more important things than you."

Paker closed his eyes. He let breath out hugely, even though its face might be right there.

"Look here," he said. "You can never be responsible for me. Do you understand that? Never. Not for a minute. It's our battle, and I'm going on. You'd better try to understand that, too."

"I will make the situation clear. I may have to do more than simply to ignore you. If I find that your presence is likely to interfere with what I must do, I will be obliged to render you inoperative."

For a moment Paker just breathed. Why didn't it say "kill?"

"I'll manage," he repeated, and started by it in the dark.

So they went on together. The belt was slow and he lay on his back letting the blackness slide over him and slide over him. He was sleepy. Here! Biting at his lips didn't help. Would the robot wake him or merely let him go on, riding slowly into the limbo of this hideous world? In any case he couldn't ask. A question of pride more than of a broken neck; his muscles were too sore for him to sit up. While your eyes were open you could stay awake, but how to be sure your eyes were open still?

And then something had him by the shoulder and R 391's voice was at him, too close in the darkness.

"In three Earth minutes I will say to you, 'Run!' and when I say that you must face back the way we have come and run as rapidly as possible."

His shoulder was his own again. Paker sat up, shuddering. Seven pills remained in the hip pouch and because his fingers couldn't tell which was which he swallowed them all.

When the robot shouted at him—*shouted!*—he started to run, only to find that he was already running, leaning away from his lame side as if to leave it behind, going furiously, all but galloping.

The air boomed out, again, again. Behind and over his left shoulder a sudden great jag of white broke the dark. Then something moved abruptly and the crash detonated—inside his ears this time. He tried to shake it out, blinking hard. Behind, the darkness caved slowly into a pale green, and there was a room, long and with something like a giant starship drive for one wall. A blur went through the hole while it was still widening, and then he turned and lunged for all that light.

He fell.

He was on his knees at the middle of the belt and overhead the hole passed by. Well, said something odd inside him, at least you were headed in the right direction. Then he screamed and was running again. He caught up with the hole without any trouble. When he fell again he was able to grab the edge with his single hand.

For an instant he simply hung there, his heels skittering away from him helplessly. He hooked the other elbow into the opening and pulled himself toward it. Head. And shoulders.

His feet found purchase and he pushed himself up and through.

The floor was probably a meter or so lower than the conveyor belt, and as he fell a gout of blue-white kicked under him. Then he dropped through where it had been and slammed flat, nose first, and he was weeping and trying to breathe and rolling all at once, and around the heat swirled like heavy windswept smoke.

Almost where he had fallen a young man in a flaming sports shirt crouched behind a cabinet: Robot R 391. A huge hovercar filled the entrance across the room, its bumper pressed against the sides. As the robot moved from one side of the cabinet to the other a gun on top of the aircar moved too, keeping almost exact pace with its opponent; and just as the robot reached the edge that blue-white slammed out. The air was alive with heat.

Then Paker saw the thing that was most of the right wall, and that wasn't like a starship drive at all. He forgot the battle in the middle of the room.

What it did look like was a giant secondary circuit for an R model. Not quite the same, but awfully close. The main difference was that where, on an R model, the secondary would have hooked into a decision-making component, this thing led to a strip of knobs and a viewplate of some kind. And before the viewplate, in



a tiny chair, sagged a Baggins, looking a bit like soggy pudding. The way any animal looked after you hit it with an organic scrambler.

But apparently it had been able to feed in the decisive order first.

And what good was a scrambler against that thing at the door?

Suddenly R 391 went over the top of the cabinet. The gun was a little behind, and the bolt caught it in the legs. The robot spun completely around in the air and dropped back behind the cabinet with a crash that Paker felt over here, in his eyes. Above the cabinet, where its legs had been, uncoiled a little puff of gray smoke; the robot lay motionless. And who could blame it?

So now came his turn. Paker played his scrambler over the aircar on the off chance it had a Baggins operator, then threw his weapon at it. No response. Slowly he stood up and he was still there, not a crash of imploding air.

The gun was still fixed on the cabinet.

What if it was impossible? He was the one with feet to stand on now.

He bet himself that he wouldn't get three steps, and then that he wouldn't get three more. And three more. The next one would put him into the line of fire. His legs wouldn't take it, neither of them. So Paker lay down and rolled. Then he stood up, but he didn't have to bet himself any more.

He walked all the way across and he was standing over the tau node of what was, for all practical purposes, an R model.

In disabling an R model you had to hook into the navel—if you could stand to think of its having a navel—and pull left hard with one hand, reach in with the other and twist. Right here! That was about what an R model itself did, when it turned off its sensors. In effect, you were making a closed system of the elaborate set of chemical imbalances that served a robot for thought.

Only he couldn't. The thing was too big. He hadn't strength enough.

But it didn't matter. He had time enough to detach the connecting lines one by one. He was jerking at a red and yellow one when the hissing stopped—the hissing that he hadn't really heard — and behind him the hovercar sank like soft thunder to the floor.

Muscles relaxed all along his back. He worked the remaining three lines free and wiped the sweat from his face and neck. His hand came away completely red. Nosebleed.

Then Paker sat down and laughed.

What he wanted to do was shout, "I'm king of the mountain!" He hadn't said that in maybe forty-five Earth years; but he hadn't felt it in about that long either. And now he was horribly tired—even if he was king of the mountain. So happily, he only thought about how funny it would be for a man his age to say something as young and as vainglorious as that, no matter what he might feel. Happily he did no more, because while he was still laughing a young voice said:

"If you can help me up to my knees and over to that hovercar, and if it has independent controls,

we should try to finish this job promptly. I have been in communication with my people, but we will have to secure our advantage for the next seven Earth weeks."

And, looking over, he saw R 391 modestly take its finger from its navel.

"Look here," said Paker, shambling over to the haphazard wheelchair they had constructed for R 391, "I can face up to it when I've been wrong. Or I can try, anyhow. But *emotions!* I still can't swallow that."

He waved his hand before it uncertainly, and sat down on the bumper of the hovercar. One of the thousand things he had learned these four Earth months was that he shrugged with his hands rather than his shoulders. Trying to do it with one hand was like hopping when you wanted to run. A bad feeling. He looked at the sky with its ridiculous green sun, then back at R 391. There was a streak of rust over its right eyebrow that made the thing's face, for Paker, immensely more bearable, almost nice in fact. What he wanted to say was, "I would respect you if you were the kind of thing it is possible to respect."

But he couldn't say that. Nor was it quite right, either. But there was a need to say it, and the need had been with him and stronger every day since they worked their way out of that monster-warren, always in his mouth, and making him say altogether too many other things.

So he went on talking, when what

he really needed was a good slug of cognac.

R 391 continued to regard him silently. This was apparently one of its days for not speaking unless you put everything to it in the form of a question.

"I mean," he tried, "why don't you come back and *help* man?" Which wasn't what he meant at all.

"You should not ask that after your exposure to Baggins culture. When we discovered this world three hundred Earth years ago, we decided to leave it alone so that your kind could see what happens when mechanical lifeforms and animals cooperate. You disappoint me, Questions Controller."

He was quiet for a moment because this was news. After all their conversations on Baggins' world the thing still withheld information, waiting for him to find the right question. He, God knew, hadn't any secrets left!

He looked at the sky again, then asked:

"Well? What happens?"

"Machines dominate."

"But if we take precautions? We're pretty shrewd, you know."

"Your kind cannot well take more precautions than did the Bagginses."

Another reminder that he'd run no real danger crossing that hours-long room, what with that giant brain not having enough discretion to tell a nosebleed from a friend, as long as the nosebleed was walking around in a friendly way? He'd heard too much about that six Earth weeks ago. He wasn't so sure, either. Or it might just mean what it said: you

couldn't take more precautions, not possibly.

And this was true.

Paker made a vague guttural noise. Let it figure out whether he was agreeing or not. He tried the other side:

"General idea is, you're doing your best to dominate right now."

"Such an idea is absurd. I am too polite to suppose that you could entertain it."

"But suppose I do?"

The radio R 391 had tricked together began to gabble in the hover-car cabin, and he limped three steps over and leaned into the door and pushed on the key. "Paker here," he said, amazed at the everyday sound of his voice. "I am sending." Then he moved the pointer to where a long, nervous tone began to trickle from the set and weighed down the key with a rock ready there for the purpose. Standing erect he looked to the north where a ship was likely to come in. But he couldn't see the fire trail, if there was one. He went back to his seat on the bumper.

"Not long now. Well? Suppose I do? What are you up to if you're not trying to beat us?"

"I am structured against supposing a thing so impolite."

"I've noticed you can get around that kind of structure when it suits you to."

It was silent.

But wasn't the answer plain enough, once you looked at robots sympathetically? Once you realized there could be that particular question. Once you'd gone through what he had.

"You're pushing us," he said. "The whole business of galactic expansion, the whole faked-out competition, is just a thing you've set up to keep us going. Not to let us get any rest, ever."

"Animals tend to exaggerate their need for rest," agreed R 391.

"Just like you pushed me. You made us camp ten degrees of latitude farther north than necessary. Why? Because you figured the cold would keep me working. That's why you were riding me all the time, too. It wasn't really bad feeling." Paker rose, creaking. "Also, I know that when you got it in the legs that was calculated. You were still pushing me."

R 391 said nothing and he walked on by it and stood looking out toward a streak of purple forest and above it the open sky.

If you were a made thing, then your reason for being was somewhere outside you—in those others, your creators. You existed to serve them. And in yourself you were nothing. You had to have them. You couldn't originate a purpose—not on the fundamental level—any more than you could originate a new question.

What you could do, though, was use what was in you to the limit.

"Wasn't this it?" he went on. "Somewhere back when you decided we were going soft, like the Baginses. The problem was, we were alone out in space. No contest. Nobody ever came up to our mark, and probably we were starting not to come up to it too—leaning on you too much for own good. So



you decided the best way to serve us was to set up some hard competition." How long had he known this? Well, for a long time and only just this moment, both. "To get us back on our feet."

He came around to where R 391 could see him.

"I guess what I want to say is—thank God you were able to decide."

Was he going to blush now, of all damned things?

"You asked me earlier about my emotions," said the robot. "'Feelings' would be the better word. I think I can make you understand them."

"I want to do that."

"You must not think of a feeling as something that happens inside you. Without an environment you would never feel anything. A feeling

is, in essence, the relation your structure has to your environment."

"You fit or you don't," he agreed, but he was not sure he really understood.

"Perhaps that is correct. But I am explaining my feelings. My ideal environment is a mathematical one similar to subuniverse 12, starting with self-evident axioms and working itself out into a closed system of a high order of complexity. In such an environment I would be perfectly happy."

Paker considered.

"And in the environment containing human beings?" he asked.

R 391 smiled carefully.

"Well, then, as you would say. I hate you. I also hate all your kind."

END

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# THE CAR POOL

BY FRANK BANTA

**Never play poker with a worm—  
especially when it's an alien!**

The leader worm, known in the Earth translation as The Hell Of A Long One—he was three meters long and approximately one-half-meter thick — wriggled happily on his white porcelain throne. "What beautiful porcelain we shall have with the calcined bones of these two Earthmen, Cards Wartson and Novice Howard!"

The other three worms were also overjoyed, as well as sycophantic. "Such lovely, lovely porcelain!" they chanted, wriggling in time.

Cards Wartson and Novice "Nosey" Howard, lying guarded on the

floor, saw objections to the plan. Cards reminded the worms, "You can just quit wriggling for joy now. You can't use our bones, because we've still got *us* wrapped around them!"

"That can be remedied," crooned the leader. "And it should be, when Earthmen come around we Martians and want to play poker, and then can't pay off when they lose."

The other worms tittered delightedly.

"You gave me a fast shuffle with those thousand legs of yours," complained Cards. "Those cards whizzed



around in a circle so fast I couldn't follow them at all."

"Yes, but he'd have won anyway, with you always trying to fill those inside straights," interjected Nosey critically. Then he looked at his captors. "But *I* don't owe you worms anything. I wasn't even playing cards with you."

"No," retorted The Hell Of A Long One, "you were just snooping around where you had no business to be. Probably prying into our porcelain making secrets. And you upset a cabinet of my clay tablets, breaking half of them."

"I can't help it if you don't have paper on this planet," shrugged Howard. "We'd trade you paper if you wanted it. When you make everything out of sand and dirt it's bound to be brittle."

"Especially when clumsy spies come around," leered the leader, once again exciting the merriment of the other worms.

"As art dealers, we of course are interested in your porcelain art objects," replied Howard stiffly, trying to cover his idle snooping with a little dignity.

"Anyway interrupted Wartson, "what ever makes you want to put *bone ash* in your porcelain paste? You'll just come out with medium hard paste. There surely isn't any sale for anything but hard-paste porcelain — why, this medium-paste stuff isn't worth the freight to Earth."

"Bone ash is so rare on this planet," explained The Hell Of A Long One dreamily. "We worms have no bones, nor have any of the other

fauna on the planet. Only fossils remain to us."

"But still," Wartson said in disgust, "soft paste is soft paste."

"Ah, but the new pastels! The new, delicate shades we shall discover!" breathed the leader worm ecstatically. "Who would want to *sell* beauty such as that?"

Wartson and Howard could see they weren't going to talk the monster out of it. "Well, let's deal another hand," said Cards resignedly, reaching for the deck. "Double or nothing, what do you say?"

**I**t had all begun earlier in the day, when the four art dealers drove down the dried-up canal in their jointly owned space car toward Erlanger, the home village of The Hell Of A Long One. They had had premonitions — from long experience — of the disasters to come.

Jock Hickerson was driving, and he gave the first admonition. "Cards," he rasped, "quit trying to beat these natives at poker!"

"Now you know that with a reasonable amount of luck —"

"Which you haven't had any of the last twenty years!"

"I got the old finesse, anyway," said Cards proudly.

"Sure you have!" flung back Jock. "You fill those inside straights of yours one out of every 565 times!"

"I wish you could miss banging up the flaps of this space car that often," retorted Cards.

"I don't know what you're talking about," said Jock loftily.

"Just stop this can for a minute and I'll point out its scars to you!"



returned Cards. "I swear, I don't know how she holds air out in space any more. Can't you keep away from these stone canal walls?"

"I have to dodge the sand dunes."

The other art dealer member of the car pool, a half-breed Indian named Teepee McGuzzle interposed sadly, "This sure is a dry place."

"I hope those worms haven't got anything to make it wetter for you either," said Howard. "All we need is to have you on another roaring toot."

"You can't roar when you toot," pointed out Teepee with some justification.

"You make a mighty fine try at it," said Jock.

"It was dirty of you fellows to thief away my grog at the space port," mourned Teepee. "People are so undercover any more that a fellow doesn't know what to think. Twenty years ago if people wanted to be dishonest they did it out in the open, where you could see them. Nowadays people are so sneaky you can hardly tell what they are doing—even if you watch them."

"You should have stayed on the reservation," advised Cards.

"If I had stayed on the Seminole reservation we wouldn't have this space car pool and be saving oodles of travel expense, because I'm the one who got the idea in the first place," said Teepee.

"Here's the town we're looking for—Erlanger," interjected Howard as a hundred half-oval, white porcelain structures loomed up in the early morning dust.

A few minutes later they were

conferring with The Hell Of A Long One—or rather, Cards was. Ignoring his business as a porcelain art dealer, he drew a deck of cards from his pocket and proceeded to explain the principles of stud poker to the worm. The other art dealers were unable to get in a word. Novice Howard wandered into another room of the ovular structure and snooped where he did not belong. Teepee went hunting for alcohol. Jock dozed in a corner.

The two disasters happened together. Just as Cards Wartson got to owing far more than he could pay, the worms heard a crash in the next room. Rushing in, they discovered the broken clay records. Jock awoke at Teepee's urgent nudging.

"Come on, we gotta get outa here!"

"What's going on?"

"Cards owes them a pot of money and Nosey broke something. They are going to kill both of them! Let's get out of here before they grab *us*!"

"Why should they grab us? We haven't done anything."

"Wait until they find out I drank up all their moss squeezing!"

"Good God!" said Jock, running for the door. The two men did not stop running until they were safely locked in the space car.

"Well, let's get back to the space port," urged Teepee when they had got their breath.

"What for?" asked Jock, surprised.

"To get some weapons. Rescue Cards and Nosey."

"We don't need any weapons at all to whip those monsters."

"I'm not wrestling with any three-meter worms," Teepee said decisively.

"Me either. So here's what we're going to do. We'll crash into the side of the building, on the side the worms are on, and before the worms get over the surprise we'll grab up Cards and Nosey and be on our way."

"Don't you think maybe those porcelain walls are too thick?" objected Teepee. "Maybe we'll just tear up our ship."

"Not if we hit her hard enough! Let's just slide back the plastic top now, so we'll be ready for a fast grab when we crash in!"

"Let her rip!" said Teepee, drunkenly sliding back the greenhouse.

They embarked upon the crazy scheme, backing off a hundred meters and then ramming the building at the vehicle's top ground speed. However, the space sedan, instead of breaking into the white porcelain, ran up the slick side of the building. Just as it arrived at a large ventilator hole in the top of the oval structure, it flipped over, and the two men tumbled down into the waiting grasp of the monsters.

Teepee was the first to get to his feet. "There's just one little old thing I want to say," he declared, weaving a little, "and that is, I'm so glad to be here!"

"I am glad you enjoy our company," returned The Hell Of A Long One.

"It's not that," said Teepee. "It's just that I want to confess. If there's anything I can't stand, it's an undercover thief."

"Kindly continue."

"I drank up your moss squeezings," Teepee said humbly.

"Stole our nectar!"

"Drank every drop."

"You'll catch it now! More calcined bones!"

"I suppose so. That fermented spinach was the lousiest nectar I ever drank, too. Sure wasn't worth what I'm going to pay for it."

Nosey Howard felt the urge too. "I also want to confess. When I broke your clay plates I was really snooping into your sex lives. I thought there might be some dirty jokes on them."

"Dirty jokes?" the H. A. Long One asked, mystified.

"You know. Slightly abnormal sex practices."

"I can't imagine what you mean."

"Well, on Earth for instance, a male and female after consorting for two or three evenings without mating may —"

He whispered busily. "You mean they may not mate the instant they sight each other?" asked The Hell Of A Long One, as he and his fellow monsters burst into frenzied fits of laughter. "So that's what dirty jokes are! No wonder you go to such extreme lengths to get new ones. Tell us more dirty jokes."

"Well," said Nosey Howard, riding high, "there was this old maid — I mean this female — who never did —"

"Never did! Stop it, you are excruciating! I can't stand it!" gasped the worm, writhing his thousand legs together in merriment. "She never did!"



**D**o you have to keep scraping this can against the sides of the canal?" complained Wartson as the foursome made their way down the canal, weaving around the sand dunes in their battered space car. "You're going to break this whole case of porcelain figurines.

"That's the thanks I get for getting us out of that mess," Jock said complacently as he recklessly whizzed from one side to the other of the stone-walled throughway.

"Yes, you were a *big* help," answered Nosey Howard caustically. He tenderly cradled his armload of Martian clay tablets. "Instead of going to the spaceport for weapons, you dump your no-good selves right back in there again! *I* was the one

who got them back in good humor." He added with pride, "Wait until they get that Emily Post book I promised them; they'll tear themselves apart laughing!"

"How about that Everglades moonshine I promised them?" queried Teepee McGuzzle, waving a souvenir nectar pot. "It'll turn that yellow fuzz of theirs a mildew green!"

"They'll never see another poker hand like the one I wound up with though," said Cards Wartson cunningly. "Instead of watching me, they were watching you two tumbling down through the hole in the ceiling. First time I ever drew three cards to an inside straight flush!"

END

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# WATERSPIDER

BY PHILIP K. DICK

ILLUSTRATED BY FINLAY

*You've read Poul Anderson stories before — but you've never read a Poul Anderson story like this one!*

## I

That morning, as he carefully shaved his head until it glistened, Aaron Tozzo pondered a vision too unfortunate to be endured. He saw in his mind fifteen convicts from Nachbaren Slager, each man only one inch high, in a ship the size of a child's balloon. The ship, traveling at almost the speed of light, continued on forever, with the men aboard neither knowing nor caring what became of them.

The worst part of the vision was just that in all probability it was true.

He dried his head, rubbed oil into his skin, then touched the button within his throat. When contact with the Bureau switchboard had been established, Tozzo said, "I admit we can do nothing to get those fifteen men back, but at least we can refuse to send any more."

His comment, recorded by the switchboard, was passed on to his co-workers. They all agreed; he listened to their voices chiming in as he put on his smock, slippers and overcoat. Obviously, the flight had been an error; even the public knew that now. But—

"But we're going on," Edwin Fer-



Virgil  
Finlay

meti, Tozzo's superior, said above the clamor. "We've already got the volunteers."

"Also from Nachbaren Slager?" Tozzo asked. Naturally the prisoners there would volunteer; their lifespan at the camp was no more than five or six years. And if this flight to Proxima were successful, the men aboard would obtain their freedom. They would not have to return to any of the five inhabited planets within the Sol System.

"Where does it matter where they originate?" Fermeti said smoothly.

Tozzo said, "Our effort should be directed toward improving the U.S. Department of Penology, instead of trying to reach other stars." He had a sudden urge to resign his position with the Emigration Bureau and go into politics as a reform candidate.

Later, as he sat at the breakfast table, his wife patted him sympathetically on the arm. "Aaron, you haven't been able to solve it yet, have you?"

"No," he admitted shortly. "And now I don't even care." He did not tell her about the other ship loads of convicts which had fruitlessly been expended; it was forbidden to discuss that with anyone not employed by a department of the Government.

"Could they be re-entering on their own?"

"No. Because mass was lost here, in the Sol System. To re-enter they have to obtain equal mass back, to replace it. That's the whole point." Exasperated, he sipped his tea and ignored her. Women, he thought. Attractive but not bright. "They need mass back," he repeated. "Which would be fine if they were making

a round trip, I suppose. But this is an attempt to colonize; it's not a guided tour that returns to its point of origin."

"How long does it take them to reach Proxima?" Leonore asked. "All reduced like that, to an inch high."

"About four years."

Her eyes grew large. "That's marvelous."

Grumbling at her, Tozzo pushed his chair back from the table and rose. I wish they'd take her, he said to himself, since she imagines it's so marvelous. But Leonore would be too smart to volunteer.

Leonore said softly, "Then I was right. The Bureau *has* sent people. You as much as admitted it just now."

Flushing, Tozzo said, "Don't tell anybody; none of your female friends especially. Or it's my job." He glared at her.

On that hostile note, he set off for the Bureau.

As Tozzo unlocked his office door, Edwin Fermeti hailed him. "You think Donald Nils is somewhere on a planet circling Proxima at this very moment?" Nils was a notorious murderer who had volunteered for one of the Bureau's flights. "I wonder—maybe he's carrying around a lump of sugar five times his size."

"Not really very funny," Tozzo said.

Fermeti shrugged. "Just hoping to relieve the pessimism. I think we're all getting discouraged." He followed Tozzo into his office. "Maybe we should volunteer ourselves



for the next flight." It sounded almost as if he meant it, and Tozzo glanced quickly at him. "Joke," Fermeti said.

"One more flight," Tozzo said, "and if it fails, I resign."

"I'll tell you something," Fermeti said. "We have a new tack." Now Tozzo's co-worker Craig Gilly had come sauntering up. To the two men, Fermeti said, "We're going to try using pre-cogs in obtaining our formula for re-entry." His eyes flickered as he saw their reaction.

Astonished, Gilly said, "But all the pre-cogs are dead. Destroyed by Presidential order twenty years ago."

Tozzo, impressed, said, "He's going to dip back into the past to obtain a pre-cog. Isn't that right, Fermeti?"

"We will, yes," his superior said, nodding. "Back to the golden age of pre-cognition. The twentieth century."

For a moment Tozzo was puzzled. And then he remembered.

During the first half of the twentieth century so many pre-cogs—people with the ability to read the future — had come into existence that an organized guild had been formed with branches in Los Angeles, New York, San Francisco and Pennsylvania. This group of pre-cogs, all knowing one another, had put out a number of periodicals which had flourished for several decades. Boldly and openly, the members of the pre-cog guild had proclaimed in their writings their knowledge of the future. And yet—as a whole, their society had paid little attention to them.

Tozzo said slowly, "Let me get this straight. You mean you're going to make use of the Department of Archaeology's time-dredges to scoop up a famous pre-cog of the past?"

Nodding, Fermeti said, "And bring him here to help us, yes."

"But how can he help us? He would have no knowledge of our future, only of his own."

Fermeti said, "The Library of Congress has already given us access to its virtually complete collection of pre-cog journals of the twentieth century." He smiled crookedly at Tozzo and Gilly, obviously enjoying the situation. "It's my hope—and my expectation—that among this great body of writings we will find an article *specifically dealing with our re-entry problem*. The chances, statistically speaking, are quite good . . . they wrote about innumerable topics of future civilization, as you know."

After a pause, Gilly said, "Very clever. I think your idea may solve our problem. Speed-of-light travel to other star systems may yet become a possibility."

Sourly, Tozzo said, "Hopefully, before we run out of convicts." But he, too, liked his superior's idea. And, in addition, he looked forward to seeing face to face one of the famous twentieth century pre-cogs. Theirs had been one brief, glorious period—sadly, long since ended.

Or not so brief, if one dated it as starting with Jonathan Swift, rather than with H. G. Wells. Swift had written of the two moons of Mars and their unusual orbital characteristics years before telescopes had

proved their existence. And so today there was a tendency in the textbooks to include him.

## II

**I**t took the computers at the Library of Congress only a short while to scan the brittle, yellowed volumes, article by article, and to select the sole contribution dealing with deprivation of mass and restoration as the *modus operandi* of interstellar space travel. Einstein's formula that as an object increased its velocity its mass increased proportionally had been so fully accepted, so completely unquestioned, that no one in the twentieth century had paid any attention to the particular article, which had been put in print in August of 1955 in a pre-cog journal called *If*.

In Fermeti's office, Tozzo sat beside his superior as the two of them pored over the photographic reproduction of the journal. The article was titled *Night Flight*, and it ran only a few thousand words. Both men read it avidly, neither speaking until they had finished.

"Well?" Fermeti said, when they had come to the end.

Tozzo said, "No doubt of it. That's our Project, all right. A lot is garbled; for instance he calls the Emigration Bureau 'Outward, Incorporated,' and believes it to be a private commercial firm." He referred to the text. "It's really uncanny, though. You're obviously this character, Edmond Fletcher; the names are similar but still a little off, as is everything else. And I'm Alison

Torelli." He shook his head admiringly. "Those pre-cogs . . . having a mental image of the future that was always askew and yet in the main—"

"In the main correct," Fermeti finished. "Yes, I agree. This *Night Flight* article definitely deals with us and the Bureau's Project . . . herein called *Waterspider*, because it has to be done in one great leap. Good lord, that would have been a perfect name, had we thought of it. Maybe we can still call it that."

Tozzo said slowly, "But the pre-cog who wrote *Night Flight* . . . in no place does he actually give the formula for mass-restoration or even for mass-deprivation. He just simply says that 'we have it.'" Taking the reproduction of the journal, he read aloud from the article:

Difficulty in restoring mass to the ship and its passengers at the termination of the flight had proved a stumbling block for Torelli and his team of researchers and yet they had at last proved successful. After the fateful implosion of the *Sea Scout*, the initial ship to—

"And that's all," Tozzo said. "So what good does it do us? Yes, this pre-cog experienced our present situation a hundred years ago—but he left out the technical details."

There was silence.

At last Fermeti said thoughtfully, "That doesn't mean he didn't *know* the technical data. We know today that the others in his guild were very often trained scientists." He examined the biographical report. "Yes,

while not actually using his pre-cog ability he worked as a chicken-fat analyst for the University of California."

"Do you still intend to use the time-dredge to bring him up to the present?"

Fermeti nodded. "I only wish the dredge worked both ways. If it could be used with the future, not the past, we could avoid having to jeopardize the safety of this pre-cog—" He glanced down at the article. "This Poul Anderson."

Chilled, Tozzo said, "What hazard is there?"

"We may not be able to return him to his own time. Or—" Fermeti paused. "We might lose part of him along the way, wind up with only half of him. The dredge has bisected many objects before."

"And this man isn't a convict at Nachbaren Slager," Tozzo said. "So you don't have that rationale to fall back on."

Fermeti said suddenly, "We'll do it properly. We'll reduce the jeopardy by sending a team of men back to that time, back to 1954. They can apprehend this Poul Anderson and see that *all of him* gets into the time-dredge, not merely the top half or the left side."

So it had been decided. The Department of Archaeology's time-dredge would go back to the world of 1954 and pick up the pre-cog Poul Anderson; there was nothing further to discuss.

**R**esearch conducted by the U. S. Department of Archaeology showed that in September of 1954

Poul Anderson had been living in Berkeley, California, on Grove Street. In that month he had attended a top-level meeting of pre-cogs from all over the United States at the Sir Francis Drake Hotel in San Francisco. It was probable that there, in that meeting, basic policy for the next year had been worked out, with Anderson, and other experts, participating.

"It's really very simple," Fermeti explained to Tozzo and Gilly. "A pair of men will go back. They will be provided with forged identification showing them to be part of the nation-wide pre-cog organization . . . squares of cellophane-enclosed paper which are pinned to the coat lapel. Naturally, they will be wearing twentieth century garments. They will locate Poul Anderson, single him out and draw him off to one side."

"And tell him what?" Tozzo said skeptically.

"That they represent an unlicensed amateur pre-cog organization in Battlecreek, Michigan, and that they have constructed an amusing vehicle built to resemble a time-travel dredge of the future. They will ask Mr. Anderson, who was actually quite famous in his time, to pose by their humbug dredge, and then they will ask for a shot of him within. Our research shows that according to his contemporaries, Anderson was mild and easy-going and also that at these yearly top-strategy assemblies he often became convivial enough to enter into the mood of optimism generated by his fellow pre-cogs."

Tozzo said, "You mean he sniffed



what they called 'airplane dope?' He was a 'glue-sniffer?' "

With a faint smile, Fermeti said, "Hardly. That was a mania among adolescents and did not become widespread in fact until a decade later. No, I am speaking about imbibing alcohol."

"I see," Tozzo said, nodding.

Fermeti continued, "In the area of difficulties, we must cope with the fact that at this top-secret session, Anderson brought along his wife Karen, dressed as a Maid of Venus in gleaming breast-cups, short skirt and helmet, and that he also brought their new-born daughter Astrid. Anderson himself did not wear any disguise for purposes of concealing his identity. He had no anxieties, being a quite stable person, as were most twentieth century pre-cogs.

"However, during the discussion periods between formal sessions, the pre-cogs, minus their wives, circulating about, playing poker and arguing, some of them it is said stoning one another—"

"Stoning?"

"Or, as it was put, becoming stoned. In any case, they gathered in small groups in the antechambers of the hotel, and it is at such an occasion that we expect to nab him. In the general hubbub his disappearance would not be noted. We would expect to return him to that exact time, or at least no more than a few hours later or earlier . . . preferably not earlier because *two* Poul Andersons at the meeting might prove awkward."

Tozzo, impressed, said, "Sounds foolproof."

"I'm glad you like it," Fermeti said tartly, "because you will be one of the team sent."

Pleased, Tozzo said, "Then I had better get started learning the details of life in the mid twentieth century." He picked up another issue of *If*. This one, May of 1971, had interested him as soon as he had seen it. Of course, this issue would not be known yet to the people of 1954 . . . but eventually they would see it. And once having seen it they would never forget it . . .

Ray Bradbury's first textbook to be serialized, he realized as he examined the journal. *The Fisher of Men*, it was called, and in it the great Los Angeles pre-cog had anticipated the ghastly Gutmanist political revolution which was to sweep the inner planets. Bradbury had warned against Gutman, but the warning had gone—of course—unheeded. Now Gutman was dead and the fanatical supporters had dwindled to the status of random terrorists. But had the world listened to Bradbury—

"Why the frown?" Fermeti asked him. "Don't you want to go?"

"Yes," Tozzo said thoughtfully. "But it's a terrible responsibility. These are no ordinary men."

"That is certainly the truth," Fermeti said, nodding.

### III

Twenty-four hours later, Aaron Tozzo stood surveying himself in his mid twentieth century clothing and wondering if Anderson would be deceived, if he actually could be duped into entering the dredge.

The costume certainly was perfection itself. Tozzo had even been equipped with the customary waist-length beard and handlebar mustache so 'popular circa 1950 in the United States. And he wore a wig.

Wigs, as everyone knew, had at that time swept the United States as the fashion note par excellence; men and women both had worn huge powdered perukes of bright colors, reds and greens and blues and of course dignified grays. It was one of the most amusing occurrences of the twentieth century.

Tozzo's wig, a bright red, pleased him. Authentic, it had come from the Los Angeles Museum of Cultural History, and the curator had vouched for it being a man's, not a woman's. So the fewest possible chances of detection were being taken. Little risk existed that they would be detected as members of another, future culture entirely.

And yet Tozzo was still uneasy.

However, the plan had been arranged; now it was time to go. With Gilly, the other member selected, Tozzo entered the time-dredge and seated himself at the controls. The Department of Archaeology had provided a full instruction manual, which lay open before him. As soon as Gilly had locked the hatch, Tozzo took the bull by the horns (a twentieth century expression) and started up the dredge.

Dials registered. They were spinning backward into time, back to 1954 and the San Francisco Precog Congress.

Beside him, Gilly practiced mid twentieth century phrases from a ref-

erence volume. "Diz muz be da blace . . ." Gilly cleared his throat. "Kilroy was here," he murmured. "Wha' hopen? Like man, let's cut out; this ball's a drag." He shook his head. "I can't grasp the exact sense of these phrases," he apologized to Tozzo. "Twenty-three skidoo."

Now a red light glowed; the dredge was about to conclude its journey. A moment later its turbines halted.

They had come to rest on the sidewalk outside the Sir Francis Drake Hotel in downtown San Francisco.

On all sides, people in quaint archaic costumes dragged along on foot. And, Tozzo saw, there were no monorails; all the visible traffic was surface-bound. What a congestion, he thought, as he watched the automobiles and buses moving inch by inch along the packed streets. An official in blue waved traffic ahead as best he could, but the entire enterprise, Tozzo could see, was an abysmal failure.

"Time for phase two," Gilly said. But he, too, was gaping at the stalled surface vehicles. "Good grief," he said, "look at the incredibly short skirts of the women; why, the knees are virtually exposed. Why don't the women die of whisk virus?"

"I don't know," Tozzo said, "but I do know we've got to get into the Sir Francis Drake Hotel."

Carefully, they opened the port of the time-dredge and stepped out. And then Tozzo realized something. There had been an error. Already.

The men of this decade were clean-shaven.

"Gilly," he said rapidly, "we've

got to shed our beards and mustaches." In an instant he had pulled Gilly's off, leaving his bare face exposed. But the wig; that was correct. All the men visible wore head-dress of some type; Tozzo saw few if any bald men. The women, too had luxurious wigs . . . or were they wigs? Could they perhaps be *natural* hair?

In any case, both he and Gilly now would pass. Into the Sir Francis Drake, he said to himself, leading Gilly along.

They darted lithely across the sidewalk — it was amazing how slowly the people of this time-period walked—and into the inexpressibly old-fashioned lobby of the hotel. Like a museum, Tozzo thought as he glanced about him. I wish we could linger . . . but they could not.

"How's our identification?" Gilly said nervously. "Is it passing inspection?" The business with the face-hair had upset him.

On each of their lapels they carried the expertly made false identification. It worked. Presently they found themselves ascending by a lift, or rather elevator, to the correct floor.

The elevator let them off in a crowded foyer. Men, all clean-shaven, with wigs or natural hair, stood in small clusters everywhere, laughing and talking. And a number of attractive women, some of them in garments called leotards, which were skin-tight, loitered about smilingly. Even though the styles of the times required their breasts to be covered, they were a sight to see.

Sotto voce, Gilly said, "I am stunned. In this room are some of the—"

"I know," Tozzo murmured. Their Project could wait, at least a little while. Here was an unbelievably golden opportunity to see these pre-cogs, actually to talk to them and listen to them . . .

Here came a tall, handsome man in a dark suit that sparkled with tiny specks of some unnatural material, some variety of synthetic. The man wore glasses and his hair, everything about him, had a tanned, dark look. The name on his identification . . . Tozzo peered.

The tall, good-looking man was A. E. Van Vogt.

"Say," another individual, perhaps a pre-cog enthusiast, was saying to Van Vogt, stopping him. "I read both versions of your *World of Null A* and I still didn't quite get that about it being *him*; you know, at the end. Could you explain that part to me? And also when they started into the tree and then just—"

Van Vogt halted. A soft smile appeared on his face and he said, "Well, I'll tell you a secret. I start out with a plot and then the plot sort of folds up. So then I have to have another plot to finish the rest of the story."

Going over to listen, Tozzo felt something magnetic about Van Vogt. He was so tall, so spiritual. Yes, Tozzo said to himself; that was the word, a healing spirituality. There was a quality of innate goodness which emanated from him.

All at once Van Vogt said, "There goes a man with my pants." And,



without a further word to the enthusiast, stalked off and disappeared into the crowd.

Tozzo's head swam. To actually have seen and heard A. E. Van Vogt—

"Look," Gilly was saying, plucking at his sleeve. "That enormous, genial-looking man seated over there; that's Howard Browne, who edited the pre-cog journal *Amazing* at this time-period."

"I have to catch a plane," Howard Browne was saying to anyone who would listen to him. He glanced about him in worried anxiety, despite his almost physical geniality.

"I wonder," Gilly said, "if Doctor Asimov is here."

**W**e can ask, Tozzo decided. He made his way over to one of the young women wearing a blonde wig and green leotards. "WHERE IS DOCTOR ASIMOV?" he asked clearly in the argot of the times.

"Who's to know?" the girl said.

"Is he here, miss?"

"Naw," the girl said.

Gilly again plucked at Tozzo's sleeve. "We must find Poul Anderson, remember? Enjoyable as it is to talk to this girl—"

"I'm inquiring about Asimov," Tozzo said brusquely. After all, Isaac Asimov had been founder of the entire twenty-first century positronic robot industry. How could he not be here?

A burly outdoorish man strode by them, and Tozzo saw that this was Jack Vance. Vance, he decided, looked more like a big game hunter than anything else . . . we must be-

ware of him, Tozzo decided. If we got into any altercation Vance could take care of us easily.

He noticed now that Gilly was talking to the blonde-wigged girl in the green leotards. "MURRAY LEINSTER?" Gilly was asking. "The man whose paper on parallel time is still at the very forefront of theoretical studies; isn't he—"

"I dunno," the girl said, in a bored tone of voice.

A group had gathered about a figure opposite them; the central person whom everybody was listening to was saying, ". . . all right, if like Howard Browne you prefer air travel, fine. But I say it's risky. I don't fly. In fact even riding in a car is dangerous. I generally lie down in the back." The man wore a short-cropped wig and a bow tie; he had a round, pleasant face but his eyes were intense.

It was Ray Bradbury, and Tozzo started toward him at once.

"Stop!" Gilly whispered angrily. "Remember what we came for."

And, past Bradbury, seated at the bar, Tozzo saw an older, care-weath-ered man in a brown suit wearing small glasses and sipping a drink. He recognized the man from drawings in early Gernsback publications; it was the fabulously unique pre-cog from the New Mexico region, Jack Williamson.

"I thought *Legion of Time* was the finest novel-length science-fiction work I ever read," an individual, evidently another pre-cog enthusiast, was saying to Jack Williamson, and Williamson was nodding in pleasure.

"That was originally going to be

a short story," Williamson said. "But it grew. Yes, I liked that one, too."

Meanwhile Gilly had wandered on, into an adjoining room. He found at a table, two women and a man in deep conversation. One of the women, dark-haired and handsome, with bare shoulders, was—according to her identification plate—Evelyn Paige. The taller woman he discovered was the renowned Margaret St. Clair, and Gilly at once said:

"Mrs. St. Clair, your article entitled *The Scarlet Hexapod* in the September 1959 *If* was one of the finest—" And then he broke off.

Because Margaret St. Clair had not written that yet. Knew in fact nothing about it. Flushing with nervousness, Gilly backed away.

"Sorry," he murmured. "Excuse me; I became confused."

Raising an eyebrow, Margaret St. Clair said, "In the September 1959 issue, you say? What are you, a man from the future?"

"Droll," Evelyn Paige said, "but let's continue." She gave Gilly a hard stare from her black eyes. "Now Bob, as I understand what you're saying—" She addressed the man opposite her, and Gilly saw now to his delight that the dire-looking cadaverous individual was none other than Robert Bloch.

Gilly said, "Mr. Bloch, your article in *Galaxy: Sabbatical*, was—"

"You've got the wrong person, my friend," Robert Bloch said. "I never wrote any piece entitled *Sabbatical*."

Good lord, Gilly realized. I did it again; *Sabbatical* is another work which has not been written yet. I had better get away from here.

He moved back toward Tozzo . . . and found him standing rigidly.

Tozzo said, "I've found Anderson."

At once, Gilly turned, also rigid.

Both of them had carefully studied the pictures provided by the Library of Congress. There stood the famous pre-cog, tall and slender and straight, even a trifle thin, with curly hair—or wig—and glasses, a warm glint of friendliness in his eyes. He held a whiskey glass in one hand, and he was discoursing with several other pre-cogs. Obviously he was enjoying himself.

"Um, uhh, let's see," Anderson was saying, as Tozzo and Gilly came quietly up to join the group. "Pardon?" Anderson cupped his ear to catch what one of the other pre-cogs was saying. "Oh, uh, yup, that's right." Anderson nodded. "Yup, Tony, uh, I agree with you one hundred per cent."

The other pre-cog, Tozzo realized, was the superb Tony Boucher, whose pre-cognition of the religious revival of the next century had been almost supernatural. The word-by-word description of the Miracle in the Cave involving the robot . . . Tozzo gazed at Boucher with awe, and then he turned back to Anderson.

"Poul," another pre-cog said. "I'll tell you how the Italians intended to get the British to leave if they did invade in 1943. The British would stay at hotels, the best, naturally. The Italians would overcharge them."

"Oh, yes, yes," Anderson said, nodding and smiling, his eyes twink-



Virgil  
Finlay



ling. "And the British, being gentlemen, would say nothing—"

"But they'd leave the next day," the other pre-cog finished, and all in the group laughed, except for Gilly and Tozzo.

"Mr. Anderson," Tozzo said tensely, "we're from an amateur pre-cog organization at Battlecreek, Michigan and we would like to photograph you beside our model of a time-dredge."

"Pardon?" Anderson said, cupping his ear.

Tozzo repeated what he had said, trying to be audible above the background racket. At last Anderson seemed to understand.

"Oh, um, well, where is it?" Anderson asked obligingly.

"Downstairs on the sidewalk," Gilly said. "It was too heavy to bring up."

"Well, uh, if it won't take too awfully long," Anderson said, "which I doubt it will." He excused himself from the group and followed after them as they started toward the elevator.

"It's steam-engine building time," a heavy-set man called to them as they passed. "Time to build steam engines, Poul."

"We're going downstairs," Tozzo said nervously.

"Walk downstairs on your heads," the pre-cog said. He waved goodbye goodnaturedly, as the elevator came and the three of them entered it.

"Kris is jolly today," Anderson said.

"And how," Gilly said, using one of his phrases.

"Is Bob Heinlein here?" Anderson asked Tozzo as they descended. "I understand he and Mildred Clingerman went off somewhere to talk about cats and nobody has seen them come back."

"That's the way the ball bounces," Gilly said, trying out another twentieth century phrase.

Anderson cupped his ear, smiled hesitantly, but said nothing.

At last, they emerged on the sidewalk. At the sight of their time-dredge, Anderson blinked in astonishment.

"I'll be gosh darned," he said, approaching it. "That's certainly imposing. Sure, I'd, uh, be happy to pose beside it." He drew his lean, angular body erect, smiling that warm, almost tender smile that Tozzo had noticed before. "Uh, how's this?" Anderson inquired, a little timidly.

With an authentic twentieth century camera taken from the Smithsonian, Gilly snapped a picture. "Now inside," he requested, and glanced at Tozzo.

"Why, uh, certainly," Poul Anderson said, and stepped up the stairs and into the dredge. "Gosh, Karen would, uh, like this," he said as he disappeared inside. "I wish to heck she'd come along."

Tozzo followed swiftly. Gilly slammed the hatch shut, and, at the control board, Tozzo with the instruction manual in hand punched buttons.

The turbines hummed, but Anderson did not seem to hear them; he was engrossed in staring at the controls, his eyes wide.

"Gosh," he said.

The time-dredge passed back to the present, with Anderson still lost in his scrutiny of the controls.

#### IV

Fermeti met them. "Mr. Anderson," he said, "this is an incredible honor." He held out his hand, but now Anderson was peering through the open hatch past him, at the city beyond; he did not notice the offered hand.

"Say," Anderson said, his face twitching. "Um, what's, uh, this?"

He was staring at the monorail system primarily, Tozzo decided. And this was odd, because at least in Seattle there had been monorails back in Anderson's time . . . or had there been? Had that come later? In any case, Anderson now wore a massively perplexed expression.

"Individual cars," Tozzo said, standing close beside him. "Your monorails had only group cars. Later on, after your time, it was made possible for each citizen's house to have a monorail outlet; the individual brought his car out of its garage and onto the rail-terminal, from which point he joined the collective structure. Do you see?"

But Anderson remained perplexed; his expression in fact had deepened.

"Um," he said, "what do you mean 'my time'? Am I dead?" He looked morose now. "I thought it would be more along the lines of Valhalla, with Vikings and such. Not futuristic."

"You're not dead, Mr. Anderson," Fermeti said. "What you're facing is the culture-syndrome of the

mid twenty-first century. I must tell you, sir, that you've been napped. But you will be returned; I give you both my personal and official word."

Anderson's jaw dropped, but he said nothing; he continued to stare.

Donald Nils, notorious murderer, sat at the single table in the reference room of the Emigration Bureau's interstellar speed-of-light ship and computed that he was, in Earth figures, an inch high. Bitterly, he cursed. "It's cruel and unusual punishment," he grated aloud. "It's against the Constitution." And then he remembered that he had volunteered, in order to get out of Nachbaren Slager. That goddam hole, he said to himself. Anyhow, I'm out of there.

And, he said to himself, even if I'm only an inch high I've still made myself captain of this lousy ship, and if it ever gets to Proxima I'll be captain of the entire lousy Proxima System. I didn't study with Gutman himself for nothing. And if that don't beat Nachbaren Slager, I don't know what does . . .

His second-in-command, Pete Bailly, stuck his head into the reference room. "Hey, Nils, I have been looking over the micro-repro of this particular old pre-cog journal *Astounding* like you told me, this Venus Equilateral article about matter transmission, and I mean even though I was the top vid repairman in New York City that don't mean I can build one of *these* things." He glared at Nils. "That's asking a lot."

Nils said tightly, "We've got to get back to Earth."

"You're out of luck," Bailly told him. "Better settle for Prox."

Furiously, Nils swept the micro-reproductions from the table, onto the floor of the ship. "That damn Bureau of Emigration! They tricked us!"

Bailly shrugged. "Anyhow we got plenty to eat and a good reference library and 3-D movies every night."

"By the time we get to Prox," Nils snarled, "we'll have seen every movie—" He calculated. "Two thousand times."

"Well, then don't watch. Or we can run them backwards. How's your research coming?"

"I got going the micro of an article in *Space Science Fiction*," Nils said thoughtfully, "called *The Variable Man*. It tells about faster-than-light transmission. You disappear and then reappear. Some guy named Cole is going to perfect it, according to the old-time pre-cog who wrote it." He brooded about that. "If we could build a faster-than-light ship we could return to Earth. We could take over."

"That's crazy talk," Bailly said.

Nils regarded him. "I'm in command."

"Then," Bailly said, "we got a nut in command. There's no returning to Terra; we better build our lives on Proxima's planets and forget forever about our home. Thank God we got women aboard. My God, even if we did get back . . . what could one-inch high people accomplish? We'd be jeered at."

"Nobody jeers at me," Nils said quietly.

But he knew Bailly was right.

They'd be lucky if they could research the micros of the old pre-cog journals in the ship's reference room and develop for themselves a way of landing safely on Proxima's planets . . . even *that* was asking a lot.

We'll succeed, Nils said to himself. As long as everyone obeys me, does exactly as I tell them, with no dumb questions.

Bending, he activated the spool of the December 1962 *If*. There was an article in it that particularly interested him . . . and he had four years ahead of him in which to read, understand, and finally apply it.

Fermeti said, "Surely your pre-cog ability helped prepare you for this, Mr. Anderson." His voice faltered with nervous strain, despite his efforts to control it.

"How about taking me back now?" Anderson said. He sounded almost calm.

Fermeti, after shooting a swift glance at Tozzo and Gilly, said to Anderson, "We have a technical problem, you see. That's why we brought here to our own time-continuum. You see —"

"I think you had better, um, take me back," Anderson broke in. "Karen'll get worried." He craned his neck, peering in all directions. "I knew it would be somewhat on this order," he murmured. His face twitched. "Not too different from what I expected . . . what's that tall thing over there? Looks like what the old blimps used to catch onto."

"That." Tozzo said, "is a prayer tower."

"Our problem," Fermeti said pa-



tiently, "is dealt with in your article *Night Flight* in the August 1955 *If*. We've been able to deprive an interstellar vehicle of its mass, but so far restoration of mass has—"

"Uh, oh, yes," Anderson said, in a preoccupied way. "I'm working on that yarn right now. Should have that off to Scott in another couple of weeks." He explained, "My agent."

Fermeti considered a moment and then said, "Can you give us the formula for mass-restoration, Mr. Anderson?"

"Um," Poul Anderson said slowly, "Yes, I guess that would be the correct term. Mass-restoration . . . I could go along with that." He nodded. "I haven't worked out any formula; I didn't want to make the yarn too technical. I guess I could make one up, if that's what they wanted." He was silent, then, apparently having withdrawn into a world of his own; the three men waited, but Anderson said nothing more.

"Your pre-cog ability," Fermeti said.

"Pardon?" Anderson said, cupping his ear. "Pre-cog?" He smiled shyly. "Oh, uh, I wouldn't go so far as to say that. I know John believes in all that, but I can't say as I consider a few experiments at Duke University as proof."

Fermeti stared at Anderson a long time. "Take the first article in the January 1953 *Galaxy*," he said quietly. "*The Defenders* . . . about the people living beneath the surface and the robots up above, pretending to fight the war but actually not, actually faking the reports so interestingly that the people—"

"I read that," Poul Anderson agreed. "Very good, I thought, except for the ending. I didn't care too much for the ending."

Fermeti said, "You understand, don't you, that those exact conditions came to pass in 1996, during World War Three? That by means of the article we were able to penetrate the deception carried on by our surface robots? That virtually every word of that article was exactly prophetic—"

"Phil Dick wrote that," Anderson said. "*The Defenders*."

"Do you know him?" Tozzo inquired.

"Met him yesterday at the Convention," Anderson said. "For the first time. Very nervous fellow, was almost afraid to come in."

Fermeti said, "Am I to understand that *none of you are aware that you are pre-cogs?*" His voice shook, completely out of control now.

"Well," Anderson said slowly, "some sf writers believe in it. I think Alf Van Vogt does." He smiled at Fermeti.

"But don't you understand?" Fermeti demanded. "You described *us* in an article—you accurately described our Bureau and its interstellar Project!"

After a pause, Anderson murmured, "Gosh, I'll be darned. No, I didn't know that. Um, thanks a lot for telling me."

Turning to Tozzo, Fermeti said, "Obviously we'll have to recast our entire concept of the mid twentieth century." He looked weary.

Tozzo said, "For our purposes their ignorance doesn't matter. Because the pre-cognitive ability was there anyhow, whether they recognized it or not." That, to him, was perfectly clear.

Anderson, meanwhile, had wandered off a little and stood now inspecting the display window of a nearby gift store. "Interesting bric-a-brac in there. I ought to pick up something for Karen while I'm here. Would it be all right —" He turned questioning to Fermeti. "Could I step in there for a moment and look around?"

"Yes, yes," Fermeti said irritably.

Poul Anderson disappeared inside the gift shop, leaving the three of them to argue the meaning of their discovery.

"What we've got to do," Fermeti said, "is sit him down in the situation familiar to him: *before a typewriter*. We must persuade him to compose an article on deprivation of mass and its subsequent restoration. Whether he himself takes the article to be factual or not has no bearing; it still will be. The Smithsonian must have a workable twentieth century typewriter and 8½ by 11 white sheets of paper. Do you agree?"

Tozzo, meditating, said, "I'll tell you what I think. It was a cardinal error to permit him to go into that gift shop."

"Why is that?" Fermeti inquired.

"I see his point," Gilly said excitedly. "We'll never see Anderson again; he's skipped out on us through the pretext of gift-shopping for his wife."

Ashen-faced, Fermeti turned and

raced into the gift shop. Tozzo and Gilly followed.

The store was empty. Anderson had eluded them; he was gone.

As he loped silently out the back door of the gift shop, Poul Anderson thought to himself, I don't believe they'll get me. At least not right away.

I've got too much to do while I'm here, he realized. What an opportunity! When I'm an old man I can tell Astrid's children about this.

Thinking of his daughter Astrid reminded him of one very simple fact, however. Eventually he had to go back to 1954. Because of Karen and the baby. No matter what he found here—for him it was temporary.

But meanwhile . . . first I'll go to the library, *any* library, he decided. And get a good look at history books that'll tell me what took place in the intervening years between 1954 and now.

I'd like to know, he said to himself, about the Cold War, how the U. S. and Russia come out. And—space explorations. I'll bet they put a man on Luna by 1975. Certainly, they're exploring space now; heck, they even have a time-dredge so they must have *that*.

Ahead Poul Anderson saw a doorway. It was open and without hesitation he plunged into it. Another shop of some kind, but this one larger than the gift shop.

"Yes sir," a voice said, and a bald-headed man—they all seemed to be bald-headed here—approached him. The man glanced at An-

der's hair, his clothes . . . however the clerk was polite; he made no comment. "May I help you?" he asked.

"Um," Anderson said, stalling. What did this place sell, anyhow? He glanced around. Gleaming electronic objects of some sort. But what did they do?

The clerk said, "Haven't you been nuzzled lately, sir?"

"What's that?" Anderson said. *Nuzzled?*

"The new spring nuzzlers have arrived, you know," the clerk said, moving toward the gleaming spherical machine nearest him. "Yes," he said to Poul, "you do strike me as very, very faintly introve — no offense meant, sir, I mean, it's legal to be introved." The clerk chuckled. "For instance, your rather odd clothing . . . made it yourself, I take it? I must say, sir, to make your own clothing is highly introve. Did you weave it?" The clerk grimaced as if tasting something bad.

"No," Poul said, "as a matter of fact it's my best suit."

"Heh, heh," the clerk said. "I share the joke, sir; quite witty. But what about your head? You haven't shaved your head in *weeks*."

"Nope," Anderson admitted. "Well, maybe I do need a nuzzler." Evidently everyone in this century had one; like a TV set in his own time, it was a necessity, in order for one to be part of the culture.

"How many in your family?" the clerk said. Bringing out a measuring tape, he measured the length of Poul's sleeve.

"Three," Poul answered, baffled.

"How old is the youngest?"

"Just born," Poul said.

The clerk's face lost all its color. "Get out of here," he said quietly. "Before I call for the polpol."

"Um, what's that? Pardon?" Poul said, cupping his ear and trying to hear, not certain he had understood.

"You're a criminal," the clerk mumbled. "You ought to be in Nach-baren Slager."

"Well, thanks anyhow," Poul said, and backed out of the store, onto the sidewalk; his last glimpse was of the clerk still staring at him.

"Are you a foreigner?" a voice asked, a woman's voice. At the curb she had halted her vehicle. It looked to Poul like a bed; in fact, he realized, it was a bed. The woman regarded him with astute calm, her eyes dark and intense. Although her glistening shaved head somewhat upset him, he could see that she was attractive.

"I'm from another culture," Poul said, finding himself unable to keep his eyes from her figure. Did all the women dress like this here in this society? Bare shoulders, he could understand. But not—

And the bed. The combination of the two was too much for him. What kind of business was she in, anyhow? And in public. What a society this was . . . morals had changed since his own time.

"I'm looking for the library," Poul said, not coming too close to the vehicle which was a bed with motor and wheels, a tiller for steering.



The woman said, "The library is one bight from here."

"Um," Poul said, "what's a 'bight?'"

"Obviously, you're wanging me," the woman said. All visible parts of her flushed a dark red. "It's not funny. Any more than your disgustingly hairy head is. Really, both your wanging and your head are not amusing, at least not to me." And yet she did not go on; she remained where she was, regarding him somberly. "Perhaps you need help," she decided. "Perhaps I should pity you. You know of course that the pol-pol could pick you up any time they want."

Poul said, "Could I, um, buy you a cup of coffee somewhere and we could talk? I'm really anxious to find the library."

"I'll go with you," the woman agreed. "Although I have no idea what 'coffee' is. If you touch me I'll nilp at once."

"Don't do that," Poul said, "it's unnecessary; all I want to do is look up some historical material." And then it occurred to him that he could make good use of any technical data he could get his hands on.

What one volume might he smuggle back to 1954 which would be of great value? He racked his brains. An almanac. A dictionary . . . a school text on science which surveyed all the fields for laymen; yes, that would do it. A seventh grade text or a high school text. He could rip the covers off, throw them away, put the pages inside his coat.

Poul said, "Where's a school? The closest school." He felt the urgency

of it, now. He had no doubt that they were after him, close behind.

"What is a 'school?'" the woman asked.

"Where your children go," Poul said.

The woman said quietly, "You poor sick man."

## V

For a time Tozzo and Fermeti and Gilly stood in silence. And then Tozzo said in a carefully controlled voice. "You know what's going to happen to him, of course. Polpol will pick him up and mono-express him to Nachbaren Slager. Because of his appearance. He may even be there already."

Fermeti sprinted at once for the nearest vidphone. "I'm going to contact the authorities at Nachbaren Slager. I'll talk to Potter; we can trust him, I think."

Presently Major Potter's heavy, dark features formed on the vid-screen. "Oh, hello, Fermeti. You want more convicts, do you?" He chuckled. "You use them up even faster than we do."

Behind Potter, Fermeti caught a glimpse of the open recreation area of the giant internment camp. Criminals, both political and nonpol, could be seen roaming about, stretching their legs, some of them playing dull, pointless games which, he knew, went on and on, sometimes for months, each time they were out of their work-cells.

"What we want," Fermeti said, "is to prevent an individual being

brought to you at all." He described Poul Anderson. "If he's monoed there, call me at once. And don't harm him. You understand? We want him back safe."

"Sure," Potter said easily. "Just a minute; I'll have a scan put on our new admissions." He touched a button to his right and a 315-R computer came on; Fermeti heard its low hum. Potter touched buttons and then said, "This'll pick him out if he's monoed here. Our admissions-circuit is prepared to reject him."

"No sign yet?" Fermeti asked tensely.

"Nope," Potter said, and purposefully yawned.

Fermeti broke the connection.

"Now what?" Tozzo said. "We could possibly trace him by means of a Ganymedean sniffer-sponge." They were a repellent life form, though; if one managed to find its quarry it fastened at once to its blood system leech-wise. "Or do it mechanically," he added. "With a detec beam. We have a print of Anderson's EEG pattern, don't we? But that would really bring in the polpol." The detec beam by law belonged only to the polpol; after all, it was the artifact which had, at last, tracked down Gutman himself.

Fermeti said bluntly, "I'm for broadcasting a planet-wide Type II alert. That'll activate the citizenry, the average informer. They'll know there's an automatic reward for any Type II found."

"But he could be manhandled that way," Gilly pointed out. "By a mob. Let's think this through."

After a pause Tozzo said, "How about trying it from a purely cerebral standpoint? If you had been transported from the mid twentieth century to our continuum, what would you want to do? *Where would you go?*"

Quietly, Fermeti said, "To the nearest spaceport, of course. To buy a ticket to Mars or the outplanets—routine in our age but utterly out of the question at mid twentieth century."

They looked at one another.

"But Anderson doesn't know where the spaceport is," Gilly said. "It'll take him valuable time to orient himself. We can go there directly by express subsurface mono."

A moment later the three Bureau of Emigration men were on their way.

"A fascinating situation," Gilly said, as they rode along, jiggling up and down, facing one another in the monorail first-class compartment. "We totally misjudged the mid twentieth century mind; it should be a lesson to us. Once we've regained possession of Anderson we should make further inquiries. For instance, the Poltergeist Effect. What was their interpretation of it? And table-tapping—did they recognize it for what it was? Or did they merely consign it to the realm of the so-called 'occult' and let it go at that?"

"Anderson may hold the clue to these questions and many others," Fermeti said. "But our central problem remains the same. We must induce him to complete the mass-restoration formula in precise mathe-

metrical terms, rather than vague, poetic allusions."

Thoughtfully, Tozzo said, "He's a brilliant man, that Anderson. Look at the ease by which he eluded us."

"Yes," Fermeti agreed. "We mustn't underestimate him. We did that, and it's rebounded." His face was grim.

**H**urrying up the almost-deserted sidestreet, Poul Anderson wondered why the woman had regarded him as sick. And the mention of children had set off the clerk in the store, too. Was birth illegal now? Or was it regarded as sex had been once, as something too private to speak of in public?

In any case, he realized, if I plan to stay here I've got to shave my head. And, if possible, acquire different clothing.

*There must be barbershops.* And, he thought, the coins in my pockets; they're probably worth a lot to collectors.

He glanced about, hopefully. But all he saw were tall, luminous plastic and metal buildings which made up the city, structures in which incomprehensible transactions took place. They were as alien to him as—

Alien, he thought, and the word lodged chokingly in his mind. Because—something had oozed from a doorway ahead of him. And now his way was blocked—deliberately, it seemed—by a slime mold, dark yellow in color, as large as a human being, palpitating visibly on the sidewalk. After a pause the slime mold undulated toward him at a regular, slow rate. A human evolutionary devel-

opment? Poul Anderson wondered, recoiling from it. Good lord . . . and then he realized what he was seeing.

This era had space travel. He was seeing a creature from another planet.

"Um," Poul said, to the enormous mass of slime mold, "can I bother you a second to ask a question?"

The slime mold ceased to undulate forward. And in Poul's brain a thought formed which was not his own. "I catch your query. In answer: I arrived yesterday from Callisto. But I also catch a number of unusual and highly interesting thoughts in addition . . . you are a time traveler from the past." The tone of the creature's emanations was one of considerate, polite amusement—and interest.

"Yes," Poul said. "From 1954."

"And you wish to find a barber-shop, a library and a school. All at once, in the precious time remaining before they capture you." The slime mold seemed solicitous. "What can I do to help you? I could absorb you, but it would be a permanent symbiosis, and you would not like that. You are thinking of your wife and child. Allow me to inform you as to the problem regarding your unfortunate mention of children. Terrans of this period are experiencing a mandatory moratorium on childbirth, because of the almost infinite sporting of the previous decades. There was a war, you see. Between Gutman's fanatical followers and the more liberal legions of General McKinley. The latter won."

Poul said, "Where should I go? I'm confused." His head throbbed and he felt tired. Too much had happened.



Just a short while ago he had been standing with Tony Boucher in the Sir Francis Drake Hotel, drinking and chatting . . . and now this. Facing this great slime mold from Callisto. It was difficult—to say the least—to make such an adjustment.

The slime mold was transmitting to him. "I am accepted here while you, their ancestor, are regarded as odd. Ironical. To me, you look quite like them, except for your curly brown hair and of course your silly clothing." The creature from Callisto pondered. "My friend, the polpol are the political police, and they search for deviants, followers of the defeated Gutman, who are terrorists now, and hated. Many of these followers are drawn from the potentially criminal classes. That is, the non-conformists, the so-called introverts. Individuals who set their own subjective value-system up in place of the objective system in vogue. It is a matter of life and death to the Terrans, since Gutman almost won."

"I'm going to hide," Poul decided.

"But where? You can't really. Not unless you wish to go underground and join the Gutmanites, the criminal class of bomb-throwers . . . and you won't want to do that. Let us stroll together, and if anyone challenges you, I will say you're my servant. You have manual extensors and I have not. And I have, by a quirk, decided to dress you oddly and to have you retain your head-hair. The responsibility then becomes mine. It is actually not unusual for

higher out-world organisms to employ Terran help."

"Thanks," Poul said tautly, as the slime mold resumed its slow forward motion along the sidewalk. "But there are things I want to do—"

"I am on my way to the zoo," the slime mold continued.

An unkind thought came to Poul.

"Please," the slime mold said. "Your anachronistic twentieth century humor is not appreciated. I am not an inhabitant of the zoo; it is for life forms of low mental order such as Martian glebs and trawns. Since the initiation of interplanetary travel, zoos have become the center of—"

Poul said, "Could you lead me to the space terminal?" He tried to make his request sound casual.

"You take a dreadful risk," the slime mold said, "in going to any public place. The polpol watch constantly."

"I still want to go." If he could board an interplanetary ship, if he could leave Earth, see other worlds—

But they would erase his memory; all at once he realized that, in a rush of horror. *I've got to make notes*, he told himself. At once!

"Do, um, you have a pencil?" he asked the slime mold. "Oh, wait; I have one. Pardon me." Obviously the slime mold didn't.

On a piece of paper from his coat pocket—it was convention material of some sort—he wrote hurriedly, in brief, disjointed phrases, what had happened to him, what he had seen in the twenty-first century. Then he quickly stuck the paper back in his pocket.

"A wise move," the slime mold said. "And now to the spaceport, if you will accompany me at my slow pace. And, as we go, I will give you details of Terra's history from your period on." The slime mold moved down the sidewalk. Poul accompanied it eagerly; after all, what choice did he have? "The Soviet Union. That was tragic. Their war with Red China in 1983 which finally involved Israel and France . . . regrettable, but it did solve the problem of what to do with France—a most difficult nation to deal with in the latter half of the twentieth century."

On his piece of paper Poul jotted that down, too.

"After France had been defeated —" The slime mold went on, as Poul scratched against time.

Fermeti said, "We must glin, if we're to catch Anderson before he boards a ship." And by "glin" he did not mean glinning a little; he meant a full search with the cooperation of the polpol. He hated to bring them in, and yet their help now seemed vital. Too much time had passed and Anderson had not yet been found.

The spaceport lay ahead, a great disk miles in diameter, with no vertical obstructions. In the center was the Burned Spot, seared by years of tail-exhausts from landing and departing ships. Fermeti liked the spaceport, because here the denseness of the close-packed buildings of the city abruptly ceased. Here was *openness*, such as he recalled from childhood . . . if one dared to think openly of childhood.

The terminal building was set hundreds of feet beneath the rexe-roid layer built to protect the waiting people in case of an accident above. Fermeti reached the entrance of the descent ramp, then halted impatiently to wait for Tozzo and Gilly to catch up with him.

"I'll nilp," Tozzo said, but without enthusiasm. And he broke the band on his wrist with a single decisive motion.

The polpol ship hovered overhead at once.

"We're from the Emigration Bureau," Fermeti explained to the polpol lieutenant. He outlined their Project, described — reluctantly — their bringing Poul Anderson from his time-period to their own.

"Hair on head," the polpol lieutenant noted. "Quaint duds. Okay, Mr. Fermeti; we'll glin until we find him." He nodded, and his small ship shot off.

"They're efficient," Tozzo admitted.

"But not likeable," Fermeti said, finishing Tozzo's thought.

"They make me uncomfortable," Tozzo agreed. "But I suppose they're supposed to."

The three of them stepped onto the descent ramp — and dropped at breathtaking speed to level one below. Fermeti shut his eyes, wincing at the loss of weight. It was almost as bad as takeoff itself. Why did everything have to be so rapid, these days? It certainly was not like the previous decade, when things had gone leisurely.

They stepped from the ramp, shook themselves, and were ap-

proached instantly by the building's polpol chief.

"We have a report on your man," the gray-uniformed officer told them.

"He hasn't taken off?" Fermeti said. "Thank God." He looked around.

"Over there," the officer said, pointing.

At a magazine rack, Poul Anderson was looking intently at the display.

It took only a moment for the three Emigration Bureau officials to surround him.

"Oh, uh, hello," Anderson said. "While I was waiting for my ship I thought I'd take a look and see what's still in print."

Fermeti said, "Anderson, we require your unique abilities. I'm sorry, but we're taking you back to the Bureau."

All at once Anderson was gone. Soundlessly, he had ducked away; they saw his tall, angular form become smaller as he raced for the gate to the field proper.

Reluctantly, Fermeti reached within his coat and brought out a sleep-gun. "There's no other choice," he murmured, and squeezed.

The racing figure tumbled, rolled. Fermeti put the sleep-gun away and in a toneless voice said, "He'll recover. A skinned knee, nothing worse." He glanced at Gilly and Tozzo. "Recover at the Bureau, I mean."

Together, the three of them advanced toward the prone figure on the floor of the spaceport waiting room.

"You may return to your own time-continuum," Fermeti said quietly, "when you've given us the mass-restoration formula." He nodded, and a Bureau workman approached, carrying the ancient Royal portable typewriter.

Seated in the chair across from Fermeti in the Bureau's inner business office, Poul Anderson said, "I don't use a portable."

"You must cooperate," Fermeti informed him. "We have the scientific know-how to restore you to Karen; remember Karen and remember your newly-born daughter at the Congress in San Francisco's Sir Francis Drake Hotel. Without full cooperation from you, Anderson, there will be no cooperation from the Bureau. Surely, with your pre-cog ability you can see that."

After a pause Anderson said, "Um, I can't work unless I have a pot of fresh coffee brewing around me at all times, somewhere."

Curtly, Fermeti signaled. "We'll obtain coffee beans for you," he declared. "But the brewing is up to you. We'll also supply a pot from the Smithsonian collection and there our responsibility ends."

Taking hold of the carriage of the typewriter, Anderson began to inspect it. "Red and back ribbon," he said. "I always use black. But I guess I can make do." He seemed a trifle sullen. Inserting a sheet of paper, he began to type. At the top of the page appeared the words:

NIGHT FLIGHT

—Poul Anderson

"You say *If* bought it?" he asked Fermeti.



**"Yes,"** Fermeti replied tensely. Anderson typed:

Difficulties at Outward, Incorporated had begun to nettle Edmond Fletcher. For one thing, an entire ship had disappeared, and although the individuals aboard were not personally known to him he felt a twinge of responsibility. Now, as he lathered himself with hormone-impregnated soap

**"He starts at the beginning,"** Fermeti said biting. **"Well, if there's no alternative we'll simply have to bear with him."** Musingly, he murmured, **"I wonder how long it takes . . . I wonder how fast he writes. As a pre-cog he can see what's coming next; it should help him to do it in a hurry."** Or was that just wishful thinking?

**"Have the coffee beans arrived yet?"** Anderson asked, glancing up.

**"Any time now,"** Fermeti said.

**"I hope some of the beans are Colombian,"** Anderson said.

**L**ong before the beans arrived the article was done.

Rising stiffly, uncoiling his lengthy limbs, Poul Anderson said, **"I think you have what you want, there. The mass restoration formula is on typescript page 20."**

Eagerly, Fermeti turned the pages. Yes, there it was; peering over his shoulder, Tozzo saw the paragraph:

If the ship followed a trajectory which would carry it into the star Proxima, it would, he realized, regain its mass through a process of

leeching solar energy from the great star-furnace itself. Yes, it was Proxima itself which held the key to Torelli's problem, and now, after all this time, it had been solved. The simple formula revolved in his brain.

And, Tozzo saw, there lay the formula. As the article said, the mass would be regained from solar energy converted into matter, the ultimate source of power in the universe. The answer had stared them in the face all this time!

Their long struggle was over.

**"And now,"** Poul Anderson asked, **"I'm free to go back to my own time?"**

Fermeti said simply, **"Yes."**

**"Wait,"** Tozzo said to his superior. **"There's evidently something you don't understand."** It was a section which he had read in the instruction manual attached to the time-dredge. He drew Fermeti to one side, where Anderson could not hear. **"He can't be sent back to his own time with the knowledge he has now."**

**"What knowledge?"** Fermeti inquired.

**"That—well. I'm not certain. Something to do with our society, here. What I'm trying to tell you is this: the first rule of time travel, according to the manual, is don't change the past. In this situation just bringing Anderson here has changed the past merely by exposing him to our society."**

Pondering, Fermeti said, **"You may be correct. While he was in that gift shop he may have picked up some object which, taken back to**

his own time, might revolutionize their technology."

"Or at the magazine rack at the spaceport," Tozzo said. "Or on his trip between those two points. And—even the knowledge that he and his colleagues are pre-cogs."

"You're right," Fermeti said. "The memory of this trip must be wiped from his brain." He turned and walked slowly back to Poul Anderson. "Look here," he addressed him. "I'm sorry to tell you this, but everything that's happened to you must be wiped from your brain."

After a pause, Anderson said, "That's a shame. Sorry to hear that." He looked downcast. "But I'm not surprised," he murmured. He seemed philosophical about the whole affair. "It's generally handled this way."

Tozzo asked, "Where can this alteration of the memory cells of his brain be accomplished?"

"At the Department of Penology," Fermeti said. "Through the same channels we obtained the convicts." Pointing his sleep-gun at Poul Anderson he said, "Come along with us. I regret this . . . but it has to be done."

## VI

At the Department of Penology, painless electroshock removed from Poul Anderson's brain the precise cells in which his most recent memories were stored. Then, in a semi-conscious state, he was carried back into the time-dredge. A moment later he was on his trip back to the year 1954, to his own society

and time. To the Sir Francis Drake Hotel in downtown San Francisco, California and his waiting wife and child.

When the time-dredge returned empty, Tozzo, Gilly and Fermeti breathed a sigh of relief and broke open a bottle of hundred-year-old Scotch which Fermeti had been saving. The mission had been successfully accomplished; now they could turn their attention back to the Project.

"Where's the manuscript that he wrote?" Fermeti said, putting down his glass to look all around his office.

There was no manuscript to be found. And, Tozzo noticed, the antique Royal portable typewriter which they had brought from the Smithsonian—it was gone, too. But why?

Suddenly chill fear traveled up him. He understood.

"Good lord," he said thickly. He put down his glass. "Somebody get a copy of the journal with his article in it. At once."

Fermeti said, "What is it, Aaron? Explain."

"When we removed his memory of what had happened we made it impossible for him to write the article for the journal," Tozzo said. "He must have based *Night Flight* on his experience with us, here." Snatching up the August 1955 copy of *If* he turned to the table-of-contents page.

No article by Poul Anderson was listed. Instead, on page 78, he saw Philip K. Dick's *The Mold of Yancy* listed instead.

They had changed the past after all. And now the formula for their Project was gone—gone entirely.

"We shouldn't have tampered," Tozzo said in a hoarse voice. "We should never have brought him out of the past." He drank a little more of the century-old Scotch, his hands shaking.

"Brought who?" Gilly said, with a puzzled look.

"Don't you remember?" Tozzo stared at him, incredulous.

"What's this discussion about?" Fermeti said impatiently. "And what are you two doing in my office? You both should be busy at work." He saw the bottle of Scotch and blanched. "How'd that get open?"

His hands trembling, Tozzo turned the pages of the journal over and over again. Already, the memory was growing diffuse in his mind; he struggled in vain to hold onto it. They had brought someone from the past, a pre-cog, wasn't it? But who? A name, still in his mind but dimming with each passing moment . . . Anderson or Anderton, something like that. And in connection with the Bureau's interstellar mass-deprivation Project.

Or was it?

Puzzled, Tozzo shook his head and said in bewilderment, "I have some peculiar words in my mind. *Night Flight*. Do either of you happen to know what it refers to?"

"*Night Flight*," Fermeti echoed. "No, it means nothing to me. I wonder, though—it certainly would be an effective name for our Project."

"Yes," Gilly agreed. "That must be what it refers to."

"But our Project is called *Waterspider*, isn't it?" Tozzo said. At least he thought it was. He blinked, trying to focus his faculties.

"The truth of the matter," Fermeti said, "is that we've never titled it." Brusquely, he added, "But I agree with you; that's an even better name for it. *Waterspider*. Yes, I like that."

The door of the office opened and there stood a uniformed, bonded messenger. "From the Smithsonian," he informed them. "You requested this." He produced a parcel, which he laid on Fermeti's desk.

"I don't remember ordering anything from the Smithsonian," Fermeti said. Opening it cautiously he found a can of roasted, ground coffee beans, still vacuum packed, over a century old.

The three men looked at one another blankly.

"Strange," Torelli murmured. "There must be some mistake."

"Well," Fletcher said, "in any case, back to Project *Waterspider*."

Nodding, Torelli and Gilman turned in the direction of their own office on the first floor of Outward, Incorporated, the commercial firm at which they worked and the project on which they had labored, with so many heartaches and setbacks, for so long.

At the Science Fiction Convention at the Sir Francis Drake Hotel, Poul Anderson looked around him in bewilderment. Where had he been? Why had he gone out of the building? And it was an hour later; Tony Boucher and Jim Gunn had



left for dinner by now, and he saw no sign of his wife Karen and the baby, either.

The last he remembered was two fans from Battlecreek who wanted him to look at a display outside on the sidewalk. Perhaps he had gone to see that. In any case, he had no memory of the interval.

Anderson groped about in his coat pocket for his pipe, hoping to calm his oddly jittery nerves—and found, not his pipe, but instead a folded piece of paper.

“Got anything for our auction, Poul?” a member of the Convention committee asked, halting beside him. “The auction is just about to start—we have to hurry.”

Still looking at the paper from his pocket, Poul murmured, “Um, you mean something here with me?”

“Like a typescript of some published story, the original manuscript or earlier versions or notes. You know.” He paused, waiting.

“I seem to have some notes in my pocket,” Poul said, still glancing

over them. They were in his handwriting but he didn’t remember having made them. A time-travel story, from the look of them. Must have been from those Bourbons and water, he decided, and not enough to eat. “Here,” he said uncertainly, “it isn’t much but I guess you can auction these.” He took one final glance at them. “Notes for a story about a political figure called Gutman and a kidnapping in time. Intelligent slime mold, too, I notice.” On impulse, he handed them over.

“Thanks, the man said, and hurried on toward the other room, where the auction was being held.

“I bid ten dollars,” Howard Browne called, smiling broadly. “Then I have to catch a bus to the airport.” The door closed after him.

Karen, with Astrid, appeared beside Poul. “Want to go into the auction?” she asked her husband. “Buy an original Finlay?”

“Um, sure,” Poul Anderson said, and with his wife and child walked slowly after Howard Browne. END

SOLUTION  
TO  
SCIENCE-FANTASY  
CROSSWORD  
PUZZLE

by Jack Sharkey

(Puzzle on page 72)

A	T	O	M		A	R	C	S		B	O	S	U	N
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## The Place Where Readers And Editor Meet...

Dear Editor:

*IF* is looking up. Congratulations on A. E. Van Vogt—how'd you do it? Also *Manners and Customs of the Thrid* was good, and so was *The Reefs of Space*.

I've got one beef, though. What happened to the colored pic backgrounds? Also try to get Isaac Asimov, R.A.H. and Damon Knight, eh?

One more question: How do you get your *IF*s back after loaning them?—Walter E. Haun, R.R. Longville, Minnesota.

• Answer: With difficulty.—*Editor*.

\* \* \*

Dear Editor:

I have come to the conclusion that *IF* is making a supreme determination in doing everything to uphold the dignity of science fiction—by printing stories better by far than many others which pass as sf these days. I have been a fan since I was 13 years old. After 8 years of reading sf, I have reached the decision that *IF* beats all. In my opinion, anyone of reasonable intelligence and imagination is a potential

sf fan—which state changes to a reality when such a person finds himself presented with a good sf magazine. Many characters who pass through the pages of *IF* will undoubtedly live—I think. Clearcut stories of reality that invoke fact, fiction, prophecy and sometimes “*IF*”-ness. A friend of mine asked, “But is it fact or fiction?” Say what you like, but it still leaves a great deal of questions unanswered. So, Mr. Editor,—keep printing, keep up the great stories and, stone the crows, mate, keep *IF* rolling—(Miss) Dianne Hall-Clarke, 1/35 Wentworth Ave., Dolan's Boy, Sth. Caringbah, Sidney, N.S.W., Australia.

\* \* \*

Dear Editor:

Why not combine *IF*, *Galaxy* and *Worlds of Tomorrow* into one 230-page monthly 50c magazine? You could get more advertising by saying you had the combined circulation of the three magazines, and with the money you get from advertising you could have a better magazine. I also wonder why the Guinn magazines don't have classified advertising as brands Z-D and M do.



Also, wher are the Retief stories going to be combined into a full-sized book?—Irvin M. Koch, 1623 White Oak Road, Chattanooga 5, Tennessee.

• (1) Because we'd lose money. (2) Sounds like a good idea—maybe we'll try it. (3) They just have, or anyway about six of them have, in a book published by Ace called *Envoy to New Worlds*.—Editor.

\* \* \*

Dear Editor:

This September issue of *IF* is the first I've bought in a few issues. Van Vogt's story sold it to me, of course. I got my money's worth. It is certainly a pleasure to have him back in science fiction.

Mary Larson's *The Time of Cold* was a comfortable second. I'll look for her name in future numbers; there are not enough upbeat writers in the field.

Don't you think that the belief in sympathetic magic you display on the inside back cover is rather out of keeping with the editor of a science-fiction magazine? — Richard Kyle, 2126 Earl Avenue, Long Beach, California, 90806.

• For those who miss the point of this last remark (a group which included your editor until he went and got a copy of the magazine to check up), the reference is to the fact that the page in question contained an ad which was clearly meant to appear in *Galaxy*, not *IF* . . . By the way, more Van Vogt is on the way. One story in, more promised; but we're not just sure yet when they will appear.—Editor.

\* \* \*

Dear Editor:

This letter is going to be a dissertation on letter columns, otherwise known as lettercols. So sit right back, relax and prepare yourself to hear a sermon of sorts.

The first thing that needs to be taken care of, naturally, is to define the *purpose* of a letter column in relation to a sf magazine. First of all, it should serve as a sounding board for ideas; a place where ideas can be expounded or criticized. It should be a form of a forum where concepts are studied, analyzed, investigated. Secondly, it should not be a place where, primarily, likes and dislikes in regards to stories, art or artists are put forth. These comments are of no consequence and waste space.

"Whoa, check, gasp. Wait a minute here!" you say. "How in hell am I supposed to know what the readers want? These gripes are necessary in order that I may give them what they want."

I agree completely. Don't get me wrong; I'm not saying that the comments are bad or should be disregarded. I'm saying that you shouldn't *publish* them. Let's face it: what nobody else thinks about a story doesn't make a bit of difference to me. I've already made up my mind, and like nothin's going to change it! Such matters are completely subjective and so are not open to discussion or argument.

As things now stand only one magazine has a letter column that consistently fills the above requirements—*Analog*. Oh, sure, *If*, *Amazing* and *Fantastic* occasionally print a letter that is worth reading, but not consistently.

The next question is, what is there to write about? After all, as "P.C." said in the September, 1962, *IF*, it gets kind of hard to write editorials worth writing letters about, month after month.

Let's stop and think a minute. Just why do fen read sf? For escape? Not likely. For mental stimulation! And how do you get mental stimula-



tion? By reading about concepts, ideas, philosophies! And where can these ideas be found in science fiction? In the stories. If you stop and give it some thought, isn't each and every story in the science-fiction field, for the most part, an editorial in itself? Expounding some thought? Damning some habit? Criticizing an idea? Heck sakes, every issue of an sf magazine has at least two or three concepts to write about!

Lastly I would like to make a general observation about letter columns. That is the manner, style, tone in which the letters published are written. Some time ago I got hold of some issues of *Thrilling Wonder Stories*, *Startling Stories* and *Fantastic Story Quarterly*. Now the lettercols in said magazines were really something! Sure, the letter writers called each other names while in the process of making some point, but, heck, that was what made the columns so fascinating. It seems to me that the quality which the letter columns of today are missing is humanness. All the columns, including *Analog's*, seem unnatural, forced, inhuman. — Jim Maughan, 230 N Street, Tumwater, Washington.

• There's one thing that an editor can't do to improve his letter columns: he can't write the letters! That's up to you fellows out there. —Editor.

\* \* \*

Dear Editor:

*The Expendables* first new Van Vogt story in fourteen years? Please check the January, 1962 issue of *Scientific American*. The Hoffman Electronics Corporation ran a two page ad, and an sf story by Van Vogt was the focal point. It was called *Itself*.

The Hoffman people ran a series of six sf-oriented ads during '62, each with a short-short by an author such as Van Vogt, Heinlein, Asimov and Leiber. Each was billed "a science-fiction original created expressly for Hoffman Electronics Corporation" and served as a stepping-off point for a discussion on "How Science Fiction Becomes Scientific Fact."—Kenneth Burington, 129 South Meadow Drive, Glen Burnie, Maryland

• When we bought Van Vogt's story, we asked him how long it had been since he had written a story for an sf magazine—the 14-year figure was his. And, of course, it's true enough; he (and we) didn't think of the story appearing in the advertisement any more than we thought of his non-sf novel about communism in Asia, etc.—Editor.

That fills us up for another issue. Coming next time: a new Retief by Keith Laumer, *The City That Grew in the Sea* (and we think it's one of the best ever)—the conclusion of Poul Anderson's exciting *Three Worlds to Conquer*—In *Saturn's Rings*, by Robert F. Young—and lots more.

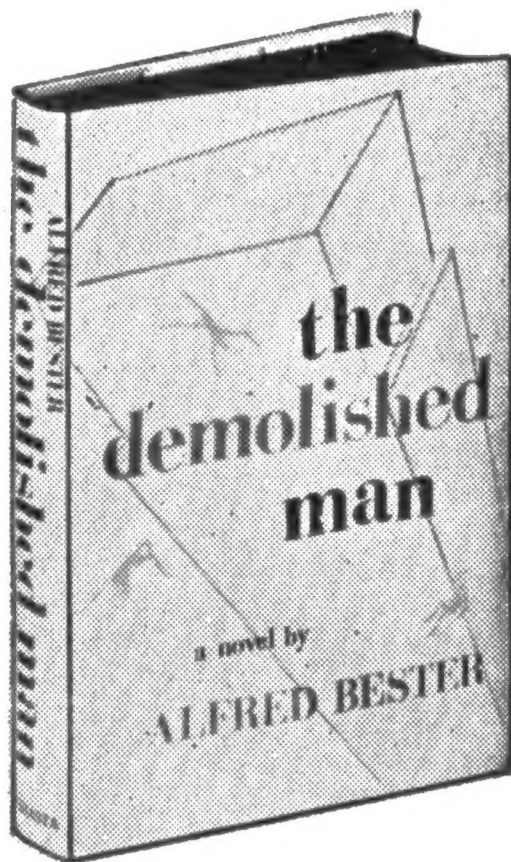
As old hands know, each issue we print at least one story by someone who has never before appeared in a science-fiction magazine. The idea is to give new talent a chance at a hearing, and thus to keep up the supply of new blood that every field needs. This issue we have two: *The Competitors*, by an Oklahoman who has been published a time or two before in other fields, but appears here with his first science-fiction story ever, and *Mack*, by a Kentucky newspaperman making his first stab at fiction of any kind. We think you'll be hearing more from both of them! —FP

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Maybe you have never heard of Graphoanalysis as it is a relatively new psychological technique. So it should be explained that Graphoanalysis is not occult graphology and has nothing at all to do with fortune-telling. It is a rapidly growing scientific procedure, already proved and tested.

Its growth during the past few years has been spectacular, even exceeding the growth of other forms of psychological testing, which have been amazing. Graphoanalysis has been written up in *Newsweek*, *Business Week*, American Management Association's *Personnel*, *Insiders' Newsletter*,

*Insurance Salesman*, *London (England) Telegraph*, and other highly regarded publications.

Even the full CBS-TV network gave time to a serious explanation of Graphoanalysis, its scientific background and its many uses in business and the professions.

What does all this mean to you?

First of all here is your chance to acquire a specialized knowledge that will help you personally in a hundred different ways. Secondly, you can almost certainly use the techniques of Graphoanalysis to advance yourself in your present occupation.

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